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ABSTRACT

A major problem in measuring student success in postsecondary education is the difficulty in tracking students' progress as they transfer from one institution to another. National studies have shown that more than half of students attend more than one institution in their pursuit of a bachelor's degree. This study examined existing state-level databases to study the feasibility of creating a method to track students across state lines. Data from a number of sources show that 39 states currently maintain a total of 46 databases, which contain information on enrollments for 69% of the U.S. full-time enrollment and 73% of the head count enrollment. Seven states maintain such information through more than one such unit-record (UR) database. Most UR databases contain information only on public institutions within the state, but 12 of the 46 contain information on at least some private institutions. Most state-level UR databases allow long-term enrollment tracking, as most have been in use for at least 6 years. The overall features of current UR databases are similar enough to allow consistent snapshots of persistence and program completion, and virtually all use the student's Social Security number to link records and complete statistics across institutions. About half of these databases currently link with other state-level databases,such as high school or wage records. Findings show relatively few design obstacles to using state-level UR databases to track students more comprehensively, but there are challenges involved. Three appendixes contain supplemental information, including descriptions of current state-level databases. (Contains 4 tables and 12 references.) (SLD)

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RESEARCH REPORT

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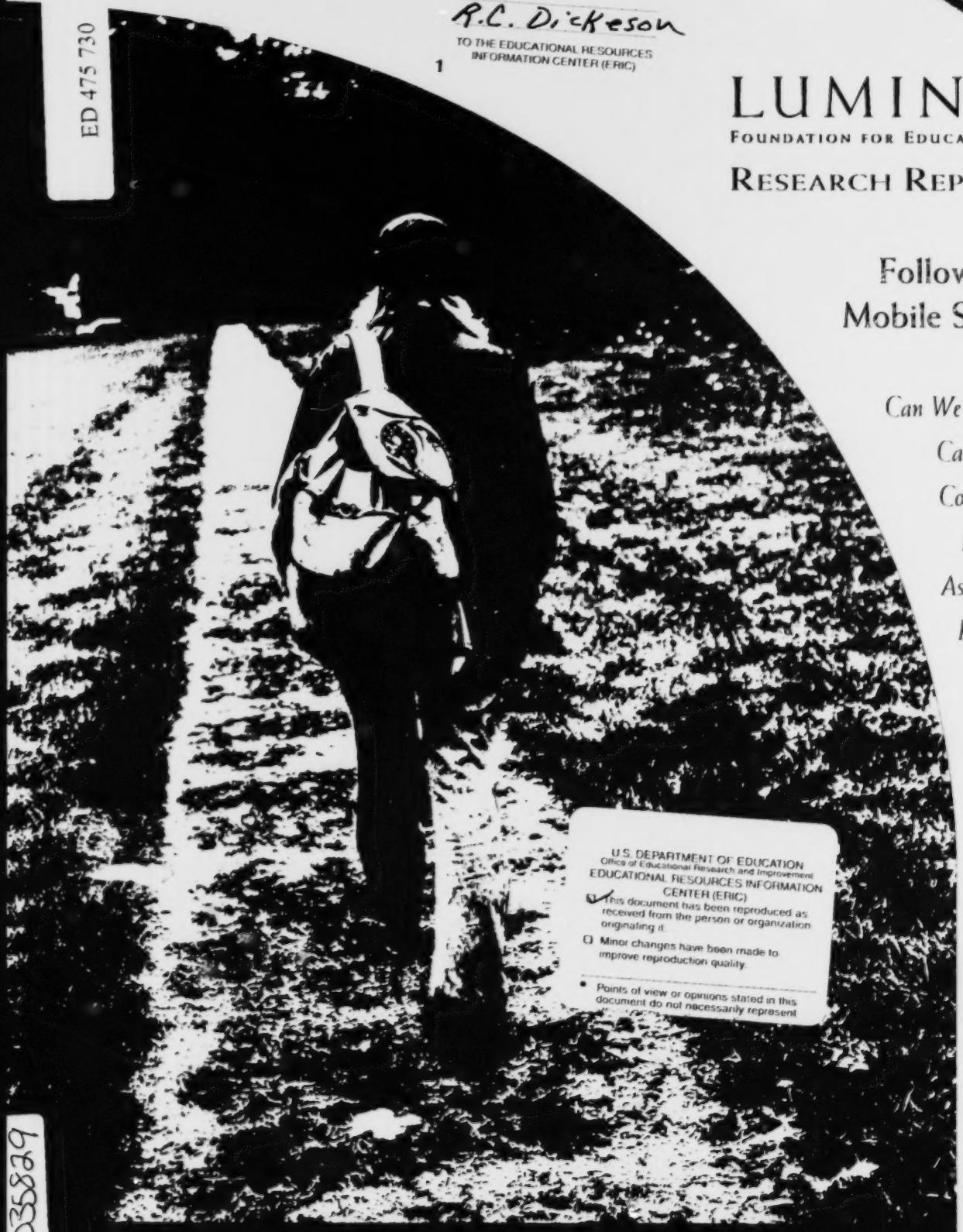
Can We Develop the Capacity for a Comprehensive Database to Assess Student Progression?



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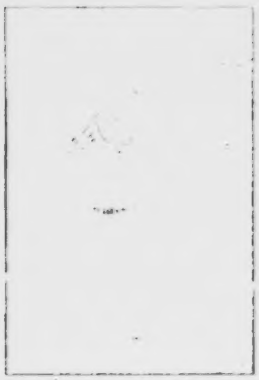

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Foreword

It is becoming increasingly difficult to understand student retention and educational goal attainment in the United States. The traditional pattern — one student attending one institution and graduating in four years — no longer endures. By contrast, today's college student is more likely than ever to transfer from one institution, enroll in a second or third school, and simultaneously take distance-learning courses from yet another provider. Reading a college transcript today is like examining a quilt. It is made up of pieces and patches obtained from several sources.

Though the patterns of progress toward postsecondary goal achievement have changed dramatically, our ability to comprehend these patterns has not kept pace. For the most part, we continue to look at *institutions* as the unit of analysis, when we should be focused on the *individual* – the mobile and technologically agile *student*.

Understanding student retention and attainment is a prerequisite to helping them succeed. Many of our institutional and public policies are predicated upon assumptions about college going that are no longer valid. Most states have figured this out; they are collecting unit-record data about this moving target in order to analyze the multiple impacts of mobility, discontinuous enrollment and technology on their educational systems.

But geographic and technological mobility ignores state boundaries. That phenomenon blurs our vision about students' progress and creates an inaccurate picture of student attainment.

To provide a clearer picture of student educational journeys, Lumina Foundation for Education commissioned the National Center for Higher Education Management Systems (NCHEMS) to examine existing state enrollment record systems and to explore the feasibility of linking them to create a more comprehensive network. What Peter Ewell and his colleagues at NCHEMS discovered surprised many higher education observers. Some 46 databases exist in 39 states that cover a substantial proportion of the nation's enrollment. If several key conditions can be satisfied — primarily technological considerations and privacy protections — a national network is possible.

Lumina Foundation is interested in testing the feasibility of such a network. Without it, no one can adequately measure the effects of efforts to improve student retention and attainment. A systematic approach to measuring student progress across state lines would:

- Inform institutional and state planning, as well as policy development.

- Benefit institutions that deserve credit for helping students take necessary steps toward completing their educational goals.
- Permit the vital exchange of information about retention and attainment.
- Assist the nation by taking a longitudinal, not episodic, look at the development of human capital.

To pursue those ends, Lumina Foundation is interested in exploring next steps. These steps could include:

- Pilot projects in high-volume metropolitan areas that cross state lines.
- Consortia efforts among states, tribes and independent college associations to collect and protect unit-record data.
- Collaborative arrangements to tackle thorny technology and privacy principles.
- Initiatives geared toward sharing lessons learned about improving student success.

In sum, Lumina Foundation supported this exploratory work, and we are pleased that it revealed important and promising findings. We want to pursue next steps to help arrive at a more effective solution to measure student progress. Such measurement can act in the students' interest and in the interest of national efforts to help them succeed in postsecondary education.

Robert C. Dickeson
Senior Vice President
Policy, Research and Evaluation
Lumina Foundation for Education

Executive summary

The need for complete measurements of student success in the nation's colleges and universities is critical today. To thrive as a nation, we must ensure that more students reach their educational goals. Unfortunately, current enrollment statistics and graduation rates don't tell us enough about the details of student achievement to allow us to develop effective policies for student success.

A major problem in measuring student success in postsecondary education is the difficulty in tracking students' progress as they transfer from one institution to another. Data on these students are collected, of course, but such student-level data, often termed "unit-record" (UR) data, generally are specific to each institution. That makes it difficult to determine whether a "dropout" at one school goes on to complete a degree at another. In short, we know that hundreds of thousands of students transfer each year, and we know that current data on student retention reported at the institutional level are incomplete and probably inaccurate, but we have no way of knowing the extent of those inaccuracies.

Researchers and other experts have long cited the need for a more comprehensive approach to tracking students' progress — particularly in light of national studies showing that more than half of students attend more than one institution in their pursuit of a bachelor's degree. If such an approach existed, state higher education planners and policy-makers could make better, more informed decisions affecting higher education. Institutions would be better able to judge their own performance and direct their resources where they're most needed and can be most effective.

Current enrollment statistics and graduation rates don't tell us enough about student achievement.

In February 2002, Lumina Foundation for Education provided funding to the National Center for Higher Education Management Systems (NCHEMS) to study existing state-level unit-record databases in an effort to determine the feasibility of creating a method to track students across state lines. This report describes that study in detail, explains its findings and conclusions and makes a series of recommendations for future action.

The problem

Current data about student retention and program completion in the United States are based largely on institutional self-reports to ACT and to the National Center for Education Statistics (NCES). Not only are these data self-reported — and therefore potentially inconsistent across institutions — they do not allow students to be tracked beyond a given institution. We do know something about overall patterns of retention and program completion from periodic national longitudinal studies conducted on samples of students. But these statistics tell us that more than half of the students who ultimately earn bachelor's degrees enroll in two or more institutions, and almost a fifth attend three or more. State-level UR databases offer some promise, as they allow students to be tracked across institutional boundaries within a given state. Yet national longitudinal studies also show that some 40 percent of the students who switch institutions cross state boundaries. Other national data resources — student loan records, for example — can show enrollment status: simply, whether or not a particular student is enrolled at most colleges and universities in the country. The added value of harnessing state-level UR databases is that they may allow students to be tracked more comprehensively at a much finer, and potentially more useful, level of detail.

More than half of the students who ultimately earn bachelor's degrees enroll in two or more institutions, and almost a fifth attend three or more.

Existing data in state-level UR databases can be used to track students on a nationwide basis if the following three conditions are met:

- A substantial proportion of the nation's enrollment must be covered by such systems.
- Existing UR data systems must contain roughly the same kinds of data elements, defined in similar (or compatible) ways.
- A method must exist to link databases together consistently.

The principal purpose of the NCHEMS study was to determine the degree to which these conditions are now met and, in the light of these findings, to recommend future directions.

Overall status of state UR data systems

Currently, 39 states maintain a total of 46 operational UR databases. These databases contain information on enrollments for 69 percent of the nation's full-time enrollment and 73 percent of its headcount enrollment. Salient characteristics of these databases include the following:

- **Multiple databases.** Seven of the 39 states that maintain UR information do so through more than one database. When multiple databases exist in a state, each typically contains information on students enrolling in a particular public system or sector — for example community colleges. Multiple databases located within the same state are usually quite compatible.

- **Institutional coverage.** Most UR databases contain information only on public institutions within the state. But 12 of 46 contain information on at least some private institutions (two encompass all private institutions, and two more are about to do so). The number of UR databases containing information on private institutions is growing: Three years ago, only six contained such information. But none of these databases as yet contains information on

proprietary (for-profit) institutions, and few contain information on tribal colleges.

- **Longitudinal data coverage.** Most state-level UR databases have been in place long enough to generate long-term enrollment-tracking records. The commonly accepted standard for this practice is six years of elapsed time for baccalaureate degree-earners. Virtually all current UR databases have been in existence long enough to do this.

- **Database design.** Overall design features of current UR databases are similar enough to allow consistent snapshot statistics of persistence and program-completion to be compiled and reported annually.

- **Record identification.** Virtually all current state-level UR databases use the student's Social Security number (SSN) to link records and compile statistics across institutions. Some states encode or scramble this number for security purposes, and all states are increasingly concerned about SSN security.

- **Experience with linking databases.** About half of the states with UR databases link them with other state-level databases, including high-school records, wage records or driver's license records. But there is very little current experience with linking UR databases across state lines.

Data element contents of UR databases

To be useful as a collective resource, existing UR databases must contain a "common core" of data that would enable tracking at a finer level of detail than is now possible. And the data elements that make up this common core must be defined consistently — preferably in terms of federal or other national standards. This study allowed investigation of these questions because NCHEMS researchers requested full documentation of all data elements in each system. Based on past experience in designing and implementing longitudinal data systems, we identified a core of 29 data elements, determined whether they were present in each of the 46 UR databases, and asked how they were defined and coded. This analysis yielded the following findings:

- All 46 UR databases can consistently track students on the basis of seven core pieces of information: enrollment (at a given institution), degree awarded, program/major, sex, race/ethnicity and date of birth. Cumulatively, these databases represent 69 percent of the nation's full-time enrollment and 73 percent of national headcount. Adding enrollment detail such as cumulative credit hours and grade point average diminishes this coverage only slightly.

- Definitions and coding structures among all of these data elements are sufficiently compatible that they can linked through appropriate re-codes or concatenation procedures, although there will be some loss of detail in a few cases.

Taken together, these results suggest that the proposition of using state-level UR databases to track students from institution to institution across state lines is reasonable.

Challenges involved

Although there are relatively few design obstacles to using state-level UR databases to track students more comprehensively, several important operational challenges would need to be overcome. They include:

- **Privacy restrictions.** Privacy policies regarding sharing educational record data are governed primarily by the Family Educational Rights and Privacy Act (FERPA), which allows data to be shared under defined circumstances. While

interpretations of FERPA vary across states, most seem to allow the kind of record-linking that would be required.

- **Use of the SSN.** Opposition to the public display and use of SSNs has been growing in higher education and constitutes a significant threat to this approach. But higher education institutions remain compelled to collect SSNs for a variety of reasons. The main alternative to using the SSN to link records across databases is to create a secure new identifier used only for this purpose — either by re-coding the SSN in some way or by matching students on other data elements.

- **Technical capacity.** A set of linked databases based on existing UR systems would eventually contain at least 13.5 million annual records, each containing approximately 75 bytes of data. The resulting data resource, while large, would not be unmanageable. In fact, it is similar in scale to existing commercial banking databases, health insurance records and federal student loan records.

Recommendations and conclusions

The results of this study suggest a number of recommendations and conclusions:

1. Current state-level UR databases provide considerable potential for supporting a comprehensive approach to track student retention and program completion.

2. The use of state-level UR databases should be supplemented by additional methods to track student enrollments — for example, those employing federal student loan records or databases compiled by institutional consortia.

3. Efforts should be made to develop common reporting standards for a key set of data elements maintained by most state-level UR databases.

4. A new unique identifier should be developed and used in place of the SSN.

5. The preferred architecture for linking state-level UR databases would be to establish a common gateway into historical records maintained independently by each state or system.

6. Participation in any data-sharing approach of this kind should be pursued on a voluntary basis.

Introduction

In February 2002 Lumina Foundation for Education provided funding to the National Center for Higher Education Management Systems (NCHEMS) to assess possibilities and recommend options for developing a comprehensive capacity to track students enrolled in multiple higher education institutions. The primary focus of this study is the student unit-record (UR) databases maintained by state higher education agencies and multi-campus higher education systems. To this end, NCHEMS surveyed all 50 state higher education agencies as well as 14 other multi-campus systems to determine whether these entities maintained UR data systems and to assess the coverage and capabilities of these systems. The center then analyzed their current capacities and their feasibility to serve as a collective resource for tracking individual students across multiple institutions and state lines. To a lesser extent, NCHEMS staff also analyzed the potential of several alternatives to state-level databases to accomplish the same ends, including national tracking based on U.S. Department of Education (USDOE) financial aid records and multi-institutional data exchanges using electronic transcript records.

Findings of the feasibility study are reported in the seven major sections of this report. The first section provides background, describing the need that initially gave rise to the study — the increasing challenge to generating meaningful information about student progression in an age of growing student attendance at multiple institutions. The second describes the methodology used by NCHEMS to conduct the 50-state survey, the creation of the resulting database of state practices, and the analyses that were undertaken using this database. A third section presents results on the overall status of state- and system-level UR databases on a number of dimensions, including the proportion of states (and their associated shares of student enrollments) that have such databases, how long they have been established, and their general capabilities. The fourth takes these findings to a greater level of detail by examining the specific data elements contained in these systems, and then

The primary focus of this study is the student unit-record databases maintained by state higher education agencies and multi-campus higher education systems.

poses questions concerning the level of commonality across state systems. It also examines some feasible sets of data elements that might be established as a "common core" among systems to enable data sharing and longitudinal tracking. The fifth and sixth sections, respectively, briefly examine a) major issues associated with tracking student progress by using individual student records — regardless of the medium used, and b) major alternatives to state/system UR databases. The report's final section provides a summary analysis of feasibility and makes associated recommendations. Appendices to the report include individual state and system profiles based on survey results, together with contact information for those responsible for UR databases.

Background

According to the best available estimates, only about half of those entering as full-time, first-time freshmen at American colleges and universities complete baccalaureate requirements at these institutions within five or six years (ACT 2002). At the same time, fewer than three-quarters of the students who enter as freshmen return as sophomores (and only about half at two-year colleges). Certainly, these statistics are sobering. Just as sobering, however, is that they only *estimate* what is happening. These statistics are based on numbers reported by colleges themselves on an annual survey conducted by ACT and the newly implemented Graduation Rate Survey (GRS) maintained by the National Center for Educational Statistics (NCES). Even these two self-report-based sources do not always agree, for two main reasons: First, because they use different methodologies to calculate completion rates; second, because colleges interpret these methodologies in different ways when they report. The fact is, there is no consistent national data source that accurately shows patterns of retention, transfer and program completion in detail and across state lines.

This is not to say that nothing is known about these phenomena. The federal government conducts periodic longitudinal studies based on samples of students that allow us to establish overall patterns of student attendance, transfer and program completion (e.g., Adelman 1999). Such studies can generate national figures, but cannot support the finer-grained investigation of student behavior at the regional or state level needed to inform effective policy. And the fact that they are conducted infrequently — only about once every ten years — means that results are soon out of date.

There is no consistent national data source that accurately shows patterns of retention, transfer and program completion in detail and across state lines.

Beginning in the mid-1980s, however, a growing number of states began to develop UR database systems to maintain enrollment records for students in public colleges and universities. Such systems were created for a variety of purposes. The most common purpose was to establish a consistent, centralized method for counting students in order to support increasingly popular enrollment-driven resource-allocation systems. Another common purpose was to monitor rates of retention and program

completion for students of color -- the result of a series of "consent decrees" by the federal Office of Civil Rights, which mandated equivalency in these rates to those experienced by white students. Consequently, most of the original (and now most mature) UR databases are located in Southeast states. More recently, such databases have been used by state higher education systems to compile consistent statistics for federal reporting through the Integrated Postsecondary Education Data System (IPEDS) maintained by NCES.

States can no longer count on their own data systems to produce meaningful estimates of student progress and attainment.

Whatever their origins, most UR databases share a number of characteristics. First, as their name suggests, they consist of electronic records that contain selected data about each and every "unit" -- each student enrolled. Second, they are based on "snapshots" of the status of each student at particular points in time during a designated period of enrollment — generally a semester or quarter, depending on the state system's academic calendar. The most common such snapshot is taken at a designated "census date," defined by the state, system, or institution usually between one and three weeks into the term, which is also used for federal reporting to IPEDS. In some cases, a second snapshot is taken at the end of the term in order to capture performance information such as credits earned and degrees awarded. A third characteristic of UR databases is that they are maintained centrally by the state or system via electronic records supplied by each institution. The information is captured at the designated reporting date according to a set of common definitions supplied by the state or system. This method ensures consistency of reporting within the state — despite the fact, as is commonly the case, that individual institutions may have different academic calendars and student registration and records systems.

Beyond these few shared structural characteristics, however, state- and system-level UR databases vary markedly in structure and capability and may use dissimilar definitions to generate seemingly "standard" statistics. Because of their different purposes, they also differ in content and coverage. Some, for example, contain only the most basic data elements about students. Others contain detailed records on student characteristics and behaviors, including extensive demographic information, program-level detail about majors, and (more rarely) transcript-level detail addressing individual course enrollments and grades earned. In addition, some UR databases contain records for private, nonprofit institutions as well as public institutions -- a consequence of state-level student aid programs.

A larger challenge involved in harnessing existing state-level UR databases to generate retention and completion statistics is that increasing numbers of students are attending multiple institutions as they progress in higher education. According to federal studies using a nationally representative cohort (Adelman 1999), 54 percent of the students who graduated from high school and had eventually received a baccalaureate degree by 1996 attended two or more institutions; 19 percent had attended three or more; and more than 40 percent crossed state lines in doing so. This situation requires a unit-record structure that contains information reported from multiple institutions if meaningful retention and completion statistics are to be calculated. But it also demands that such approaches be compatible across states with respect to choices about what data are collected, definitions of basic data elements, record structures and institutional reporting conventions. States can no longer count on their own data systems to produce meaningful estimates of student progress and attainment when

the incidence of in-migration and out-migration of students is so high. States require finer levels of detail than those provided by national longitudinal studies conducted on relatively small samples of students every decade. Each state needs an accurate picture of how well its postsecondary educational pipeline is working.

For a number of reasons, some compatibility across states can be expected. The contents and architecture of most state UR databases were defined after 1990, when publication of initial regulations governing the Student Right-to-Know and Campus Security Act (SRK) outlined the basic shape of federal student progression reporting. The subsequent statistical-reporting requirements associated with the State Postsecondary Review Entities (SPRE) in 1992 further stimulated these developments. Though the first was only partially implemented and the second abandoned, these regulations had a substantial impact on the evolving structure of state-level data-collection conventions (NCHEMS 1999). Such systems, at minimum, needed to be capable of generating cohort-based degree-completion statistics (broken down by gender, ethnicity and academic program) based on 150 percent of a program's nominal (catalog) period of study.

While state-level UR data systems in higher education are the most extensive and promising venue for using existing databases to address national and state policy questions regarding retention and completion, they are not the only sources of information available. The National Student Clearinghouse (NSC), for example, runs a popular service that can trace students from institution to institution via federal student loan records. Several consortia of institutions that share student enrollment pools in a single metropolitan area have also been formed to directly exchange information on student transfer and re-transfer, using standard electronic transcript formats such as SPEEDE/ExPRESS. Finally, state-mandated Unemployment Insurance (UI) wage-record databases are used increasingly by states to examine employment placement after a postsecondary educational experience (Seppanen 1995). All of these sources are, by their nature, limited with respect to topical and institutional coverage. All ought to be investigated to assess the feasibility of using existing databases and data-collection approaches to create an articulated resource to support research on retention and program completion.

Methodology

To investigate the feasibility of using existing UR databases on a more comprehensive basis, NCHEMS conducted a 50-state survey of state-level student-tracking capability. It quickly became apparent that in some states (for example, California), the multiple UR databases maintained by the state systems' governing boards were also worth examining. Results of the survey were coded into an Access database to determine potential areas of common coverage. (This Access database is designed to be updated and is itself an important outcome of this project.) Results were analyzed to identify features common to a significant number of UR databases. At the same time, NCHEMS staff examined important alternatives to UR databases for generating useful national statistics on retention and completion. Each of these activities is described in greater detail below.

NCHEMS conducted a 50-state survey of state-level student-tracking capability.

- **Fifty-state survey**. To prepare the survey, NCHEMS staff first examined past data-collection activities on the topic of state-level UR database capabilities. The most prominent of these is a series of surveys undertaken by the State Higher Education Executive Officers (SHEEO) organization in the mid-1990s (Russell 1999, Russell and Chisholm 1995). NCHEMS also drew on its own experience from the spring of 2000, when it conducted a 50-state survey of state-level activities to assess student learning and track alumni outcomes for the National Center for Public Policy in Higher Education (Ewell and Ries 2000). Both of these past surveys were useful, not only to provide a baseline and to suggest items for inclusion, but also to provide the last known contacts in state agencies to whom the survey should be sent.

  To begin the survey process, we made an initial telephone call to each SHEEO office to discuss the project and its purposes, and to ensure that the proper state-level informant was contacted (for a list of final state contacts, see Appendix D). We then asked state contacts to provide extensive written documentation about each of their state's UR databases, including (if available) overall descriptions of the system, institutional reporting instructions and/or formats, data element definitions and dictionar-

ies, applicable file structures and record layouts, and examples of the kinds of reports generated by the system. NCHEMS staff then reviewed this primary-source material to develop initial answers to the topics contained in a standard protocol (described below). Gaps in topical coverage were addressed through follow-up phone or e-mail interviews with the original state-level informants. We used this approach rather than the more common method of interviewing state-level officials using a single protocol (the method used in the two previous SHEEO surveys on this topic) because NCHEMS staff believed that the supplied primary-source material would reveal more about actual state-level database capabilities. Remaining ambiguities resulting from this approach were then identified and clarified through additional contacts with state-level informants. Using this method, we obtained usable documentation regarding the presence and capacities of 46 UR databases in 39 states.

A standard protocol (Appendix A) guided the survey process. The protocol, briefly, requested state-agency officials to provide information about their UR databases on the following topics:

- Whether the state currently has a UR database capability (and, if not, whether applicable system-level UR databases exist that ought to be examined).
- The history of this capability, including when the database was established, by what authority and for what purpose.
- The institutional coverage of the UR database, including whether independent institutions are included, and whether plans for expanding institutional coverage were in place.
- The frequency of data collection, addressing such matters as the census dates used for data collection, whether term or annual data are collected, term definitions (e.g., semester, quarter, etc.), and whether plans for changing the pattern of data collection were contemplated.
- The kinds of reports generated by the system, including graduation or retention reporting (and how graduation/retention rates are calculated), enrollment reporting, IPEDS reporting, etc.
- Data-management issues such as the kinds of student identifiers used in the system (e.g., SSN), who has authority to change data elements and other aspects of the system, how security and other issues are addressed, whether the UR database is linked to other state-level databases such as high school records or UI wage records, and whether the state cooperates with neighboring states to share data about students who cross state lines.

At the conclusion of the data-collection process, we summarized results in the form of a write-up for each database (see Appendix C), and sent respondents these write-ups for final verification.

- **Database on state-level UR capacity.** Using results from the 50-state survey, we constructed a standard database on state-level UR capacity that could be employed to support multiple analyses. The database was built in Microsoft Access -- a software environment that could enable both quantitative and qualitative examination of results and that could support analyses at multiple units of analysis (e.g., state, system, or individual data element). The file structure for the Access database included textual descriptive material, categorical classifications of particular aspects

of each UR system's coverage and contents based on a standard coding scheme, and detailed coverage of whether and how each UR system contained each element in a standard set of 29 commonly collected individual data elements (Appendix B). The inventory of individual data elements was based on a list developed by NCHEMS staff over many years of work building unit-record data systems at the state and institutional level (e.g., Ewell, Parker and Jones 1988; Paulson 2002). For each data element on this list, the NCHEMS database contained fields addressing such matters as coding structures and source of definitions (e.g., IPEDS, institutional, etc.). To provide a standard set of classifications regarding various database UR capabilities, NCHEMS staff developed a set of descriptive codes. To ensure consistency in the application of this coding scheme, independent raters cross-checked a randomly selected set of five complete cases, and any discrepancies in classification were identified and discussed. Initial inter-rater reliability using this method was more than 85 percent, and the vast majority of disagreements were later shown to be minor. As a result, further cross-checking was deemed unnecessary. It is important to note that the resulting database is capable of addressing many further questions about state-level UR database capabilities, and its structure also allows its contents to be easily updated as conditions change — as they undoubtedly will in years to come.

- **Data analysis.** We used the Access database to conduct a series of descriptive analyses, addressing such matters as the number and percentage of states currently maintaining UR databases with particular capacities. With the results of these descriptive analyses in hand, we undertook more detailed analyses of individual data-element coverage to identify the most commonly maintained data elements and the degree to which these employed standard or compatible structures of definition and coding. In turn we used the results of these analyses to determine some recommended sets of data elements, including a "maximum feasible" set of data elements that could be employed to link state-level UR data systems with a minimum of changes to existing data structures. NCHEMS staff proposed no changes in operating capacities or data structures that the states were likely to be unable (or unwilling) to make. For example, states with no capacity and no organizational mechanism to house or maintain such a database (e.g., Michigan) were assumed unable to develop such a capacity.

- **Alternative data sources and issues.** In conjunction with the primary task of compiling information on individual state-level UR databases, NCHEMS staff collected background material on other existing datasets or data-collection approaches that might be used to replace or supplement state-level UR databases. The most prominent of these were the NSC, which employs federal student loan records, and the SPEEDE/ExPRESS format for exchanging electronic transcript data. In both cases, staff assembled background material from existing publications and Web sites and, where necessary, conducted follow-up interviews. In addition, we investigated a number of prominent issues associated with any attempt to link electronic records for individual students, such as privacy rights and legal implications addressed by the Family Educational Rights and Privacy Act (FERPA) and the technical capacities and limits of large-scale electronic records systems. In each case, we assembled, analyzed and used background material to develop a short narrative on the topic in question.

Overall status of state-level unit-record data systems

Thirty-nine of the 50 states have operational UR databases covering at least one sector of public institutions in their states (see Table 1 on Page 14). This total represents a net gain of six states since the last systematic inventory of state-level UR databases was taken three years ago (Russell 1999). Also, the 11 states not covered by UR databases are, for the most part, fairly small. Among them, only Michigan and Pennsylvania have substantial numbers of higher education institutions and enrollments. As a result, the actual coverage of existing databases in terms of students is greater than it appears. For example, 86 percent of national full-time undergraduate enrollments and 87 percent of headcount enrollments are in states that operate UR databases.

UR databases in these 39 states share characteristics that make them potentially useful as the foundation of a national resource for tracking students across institutional and state boundaries. Among the most prominent are the following:

- **Multiple databases.** Seven of the 39 states that maintain student unit-record information do so through more than one database. These states contain several independently governed, public higher education systems, each of which has created its own enrollment database for management and reporting. Most of these states contain two UR database systems —typically, one for four-year public institutions and one for two-year community or technical colleges.[1] One state (California) operates three UR systems corresponding to its different governing board jurisdictions for public institutions.

Eighty-six percent of national full-time undergraduate enrollments and 87 percent of headcount enrollments are in states that operate UR databases.

Maintaining separate UR databases is not necessarily a problem for a state, so long as the databases contain reasonably common information. The majority of states with multiple databases

TABLE 1 — Student unit-record databases by state in 2002

State	Agency responsible	Date established
Alabama	SHEEO agency	1998
Alaska	State university system	1997
Arizona	SHEEO agency	1998
Arkansas	SHEEO agency	1993
California	Community college system	1992
	University of California system	1980
	State university system	1970
Colorado	SHEEO agency	1987
Connecticut	[None]	
Delaware	[None]	
Florida	State university system	1978
	Community college system	[Unknown]
Georgia	SHEEO agency	[Unknown]
Hawaii	SHEEO agency	1995
Idaho	SHEEO agency	[Unknown]
Illinois	SHEEO agency	1983
Indiana	SHEEO agency	1979
Iowa	[None]	
Kansas	[None]	
Kentucky	SHEEO agency	1980
Louisiana	SHEEO agency	[Unknown]
Maine	SHEEO agency	[Unknown]
Maryland	SHEEO agency	1977
Massachusetts	SHEEO agency	1985
Michigan	[None]	
Minnesota	SHEEO agency	1983
Mississippi	SHEEO agency	1984
Missouri	SHEEO agency	1988
Montana	[None]	
Nebraska	[None]	
Nevada	SHEEO agency	[Unknown]
New Hampshire	[None]	
New Jersey	SHEEO agency	1985
New Mexico	SHEEO agency	1994
New York	State university system (SUNY)	1988
	City university system (CUNY)	[Unknown]
North Carolina	Community college system	1980
	State university system	[Unknown]
North Dakota	SHEEO agency	[Unknown]
Ohio	SHEEO agency	1998
Oklahoma	SHEEO agency	1977
Oregon	Community college system	1995
	State university system	1990
Pennsylvania	[None]	
Rhode Island	[None]	
South Carolina	SHEEO agency	1993
South Dakota	SHEEO agency	1998
Tennessee	SHEEO agency	[Unknown]
Texas	SHEEO agency	1973
Utah	SHEEO agency	1999
Vermont	[None]	
Virginia	SHEEO agency	[Unknown]
Washington	Community and technical college system	1994
West Virginia	SHEEO agency	[Unknown]
Wisconsin	State university system	1973
	Community and technical college system	[Unknown]
Wyoming	Community college system	2000

frequently share data among various sectors, and several do this on a regular basis to construct statistics on transfer and on state-level retention/program completion. In some cases, though, within-state data exchange among separate UR database systems is in its infancy, and such linkages are only accomplished on an *ad hoc* basis (e.g., California).

- **Institutional coverage.** Most UR databases contain information only on public institutions within the state. Although all public enrollments are covered by the UR databases in the states that have them, databases in 12 states contain at least some information from private institutions. Only two of these states (Kentucky and Oklahoma) have complete information from private institutions. Another three (Indiana, Minnesota and South Carolina) have substantial private institutional coverage, and two more (Arkansas and Texas) are just beginning to systematically collect information from all private institutions. In the remaining five cases, only a few private institutions participate, although state officials are taking steps to expand the participation of these schools. The primary vehicle for promoting such expansion is participation in state scholarship programs: States can require private institutions to report their data as a condition of eligibility for such funds. Indeed, in one state whose UR database contains information drawn from private institutions (Ohio), only those students funded through state support are reported. However, no UR databases contain information on proprietary (for-profit) postsecondary institutions, and only a few contain information on tribal colleges.

The dearth of information from private and proprietary institutions has serious ramifications for establishing a comprehensive system of student tracking. Based on the latest available IPEDS data, 55 percent of all degree-granting postsecondary institutions are private. These institutions contain 23 percent of all undergraduate full-time enrollment (FTE) and 19 percent of the nation's headcount enrollment. Since some state-level UR databases do contain information from private institutions, an estimate of the total current enrollment coverage of such databases is 69 percent of national undergraduate FTE enrollment and 73 percent of national undergraduate headcount. It is important to note, moreover, that many of the people responsible for state UR databases express a strong desire to include private institutions and are taking steps to do so where possible. And in at least one state (Minnesota), independent institutions are beginning to establish their own statewide data resource for tracking student success through the auspices of the state's Private College Council. As an indication of future trends, it is useful to note that, as recently as three years ago, only six state-level UR databases reported collecting any information from private institutions (Russell 1999).

The majority of state-level UR databases have been in place long enough to enable meaningful longitudinal studies

- **Longitudinal data coverage.** The majority of state-level UR databases have been in place long enough to enable meaningful longitudinal studies of student progress and degree completion. Seven of the 46 UR databases (15 percent) date back to the 1970s, and 11 (23.9 percent) were established in the 1980s. And of those created in the 1990s, half were launched before 1995. The date of formal establishment of a UR database usually predates the point at which meaningful data can be collected from

institutions. But allowing two years for definitions and reporting conventions to be established (a typical time period, given survey responses) provides ample time for historical reporting for the majority of these databases. Federal reporting standards established through Student Right-to-Know and the more recently implemented IPEDS Graduation Rate Survey (GRS), for example, establish a common reporting rubric for establishing program-completion rates of 150 percent of the catalog length of the program — six years for four-year baccalaureate programs and three years for two-year associate degree programs. Even though part-time students have been occasionally tracked for as long as 12 years, the data resources now in place through state-level UR databases appear to include enough mature student records to permit large-scale investigations of student progression. And more such records are available with each year that passes.

Widespread use of the SSN as a record identifier and link element has a major impact on the feasibility of tracking students.

- **Database design.** Although each state-level UR database has its own structure, overall architectures are quite similar. The most common structure involves term-based reporting of required data elements by institutions at a designated census date near the beginning of the term. Academic attainment indicators (e.g., degrees earned or cumulative credits earned) are similarly extracted once a year—usually at the end of the spring term. In the 39 states that have databases, 21 (53.8 percent) of them have databases that conform to this "standard" design. A smaller but significant number of states (eight, or 20.5 percent) capture data retrospectively only once a year. Such databases, while sufficient to generate annual retention and completion statistics, cannot be used to identify and track student retention and attainment on a term-by-term basis. About the same number of states (nine) capture data on both enrollment and academic accomplishments for every term of enrollment. Meanwhile, a minority of UR databases (e.g., Hawaii) capture data on individual course enrollments, including grades earned by individuals in specific courses.

  Much of the basic content of state-level UR databases is also similar, although each contains its own unique combination (see next section). Most contain the standard student descriptors needed to complete federal IPEDS reports such as gender, race/ethnicity, degrees granted and program major. Taken together, these characteristics suggest that it is feasible to employ such databases to track students longitudinally across institutions and states so long as a) only annual statistics on persistence and degree completion are required, and b) only limited demographic breakdowns of these statistics are needed. It is important to note for the future, though, that the changing nature of academic calendars may someday force a change in this basic record structure. With more and more students attending asynchronously or in non-term-based courses, a different approach to archiving electronic records may eventually emerge.

- **Record identification.** All databases require a unique identifier to match student records from term to term or to add new information to an established student record. Virtually all state-level UR databases employ the Social Security number (SSN) in this capacity. Because of increasing concerns about privacy and identity theft, however, many officials worry about their reliance on the SSN, and some are taking steps to encode it or replace it with new kinds

of unique identifiers. Some states (Alabama, Maryland, Ohio and Oregon, for instance) use a standard, secure routine to encrypt the SSNs used in their UR databases. Other states or systems (Washington Community Colleges, Wisconsin, Alaska and South Carolina) use the SSN only for linking with external databases and do not employ it as the primary means of record identification. Moreover, most states will strip the SSNs from any information provided to third parties, usually substituting an assigned case number in its place. Widespread use of the SSN as a record identifier and link element has a major impact on the feasibility of tracking students across state lines; without a universally adopted unique identifier, students cannot be located once they leave an institution in one state and enroll in another. Thus the fact that states are under some pressure to drop the SSN as a unique identifier — and, indeed, in some cases to delete it from the student record entirely — constitutes a potentially significant drawback to linking state UR databases for tracking purposes (see "Challenges in using state-level UR databases," Page 28).

- **Experience with linking UR databases.** Though they have a common unique identifier in the form of the SSN, only about half the states with student UR databases in higher education have any experience in linking them with other state-level UR databases such as high school and employment records. Still fewer have experience in working with counterpart agencies in other states to track college students across state lines. The most commonly reported linkages are with state level Unemployment Insurance (UI) wage-record databases. Sixteen states accomplish such links regularly via an SSN-matching procedure, primarily to examine the effectiveness of vocational training programs in two-year colleges.[2] In addition, many states, indicate that they have "plans for" or have "explored" such procedures (though about the same number of those that have actually accomplished such linkages found the process yielded less useful information than they had hoped for). Nine states link UR databases with high school UR records, primarily to provide feedback reports to individual high schools on the subsequent performance of their graduates in college. Other databases that some states link to include a) Department of Motor Vehicle (DMV) records (to conduct studies about the proportion of higher education graduates remaining in state), b) U.S. military records (as a supplement to UI wage record data on employment), and c) ACT survey and test-score data of various kinds. Finally, all seven of the states with multiple UR databases employ the SSN or other linking procedures to share data on student transfer behavior across systems within the state.

To date, however, very few states have any experience sharing data across state lines. Only the Washington State Community and Technical College Board reported matching its UR database regularly with those of neighboring states to track former students and graduates across state lines. With respect to the feasibility of linking state-level UR databases to yield a more comprehensive data resource, these results are mixed. On the one hand, because of the use of a common identifier (the SSN), they suggest that multi-state linkages among databases are possible. On the other

Using state-level UR databases as the foundation for a cross-state student-tracking system is a reasonable proposition.

hand, there clearly are few examples of such linkages at this point.

Taken together, these results suggest that using state-level UR databases as the foundation for a cross-state student-tracking system is a reasonable proposition. Many states now have such databases, and these databases include most of the students enrolled in the nation's colleges and universities. At the same time, the coverage of such systems is clearly expanding. More and more states and systems are establishing UR databases, and those in place are frequently being extended to include private institutions. But the lack of universal coverage will always limit such an approach. The pattern of institutional coverage also constrains the kinds of uses that can be made of the resulting data. For example, the fact that a large proportion of the nation's students are captured in UR databases, but not a similarly large proportion of its colleges and universities, means that such data will be much more useful in investigating student retention patterns than in comparing institutional performance.

Similarly, because most UR systems share a common architecture and use a common unique identifier (the SSN), the purely technical challenges to linking them are less serious. Many states routinely link their UR databases to other state-level records using the SSN, and only student-privacy considerations (serious though they are) prevent more widespread linking of this kind. On the other hand, there is little experience in accomplishing such linkages across state lines, and states would have to see it in their interest to do so. Finally, much depends on the actual contents of these databases and the degree to which they overlap. Data sources that rely on federal student loan records (such as the NSC), already can determine whether a given student is enrolled at most colleges and universities in the country. The added value of using state-level UR databases is that they promise the capability of tracking students across state lines at a much finer, and potentially more useful, level of detail.

Data elements in state-level unit-record databases

As noted, the 46 UR databases in the 39 states that maintain them share a number of characteristics that are promising for use on a broader basis. The benefits of such an approach, however, depend considerably on the scope and commonality of these databases. To be useful at a national level, they must contain a "common core" of data elements that would enable tracking on a more detailed basis than is currently feasible with sources such as federal loan records. Second, this common core of data elements must be defined consistently — preferably according to existing federal or other national standards.

The NCHEMS survey allowed direct investigation of this question by collecting information about the detailed data contents of each UR system identified. Because researchers requested full documentation for each system (including institutional data-reporting formats, data element dictionaries and examples of state-generated reports), we could examine in some detail the feasibility of using such systems as the basis for a more comprehensive system. This is not to say that NCHEMS received all of the detailed documentation for every UR database that would have been desirable. Of the 46 databases examined, we received documentation on 37 that was sufficient to allow an in-depth look at their capabilities. But enough detail was available even in the nine remaining cases to support robust estimates of their overall capabilities.

- **Key data elements.** As noted, NCHEMS has considerable experience in developing specifications for longitudinal student tracking systems for both states and individual institutions. This experience gave us a working knowledge of the particular data elements that likely will be most useful in conducting studies of student progress and degree completion. Indeed, specification of a relatively limited "common core" of data elements is usually sufficient to meet most needs for detailed reporting (Paulson 2002). Using this knowledge, NCHEMS staff

To be useful at a national level, databases must contain a "common core" of data elements.

identified a set of 29 data elements for detailed investigation within the 46 state-level UR databases identified (Appendix B). These data elements fall into a number of basic groupings:

- **Demographics.** These elements include standard student descriptors such as sex, race/ethnicity, birth date, citizenship and geographic origin; they are used primarily to identify distinct student subpopulations of interest.

- **Academic background.** These elements provide information on prior educational experiences and achievements that are relevant to current academic performance, such as high school attended, admissions examination results or prior college experience (including college-level transfer credit earned).

- **Enrollment status.** These elements describe various characteristics of student enrollment in the institution they are now attending, such as full-time/part-time status, degree-seeking status, first term of academic history, program major or concurrent enrollment with another institution.

- **Academic activity.** These elements address various aspects of a student's academic behavior while enrolled in a given term (or other enrollment period), including credits enrolled for and completed, and associated term grade-point average (GPA).

- **Academic attainment.** These elements address outcomes of enrollment or summaries of academic activity, such as degrees earned, cumulative credits enrolled for and earned, and cumulative GPA. They are generally used as "dependent variables" in most longitudinal analyses.

We first examined the documentation for each UR database to determine whether each of these 29 data elements was present. If a data element was present, we sought further information about how it was coded and defined and then included full specifications in the NCHEMS study's database. We then analyzed the study database to determine patterns of data-element coverage for the 46 UR databases.

- **Analysis of data element coverage.** A first question is simply the frequency with which particular key data elements are included in state-level UR databases. Table 2 (Page 21) provides a breakdown of overall data-element coverage by reporting the number and percentage of UR databases (N=46) that contain one or more of the 29 key elements, together with corresponding statistics for all states (N=50) and states covered by UR databases (N=39). Data elements are reported as present in this analysis under the strictest definitions possible. That is, if there was any doubt about whether a particular data element was present in a particular database, that element was counted as not present. This means that the statistics presented in Table 2 represent *minimum* estimates of coverage for each of the 29 key data elements.

  A number of conclusions are apparent from this display. First, all current state-level UR databases contain sufficient information to track student enrollment on an annual basis through degree completion, disaggregated by a number of important variables including sex, race/ethnicity, age and program of study. Geographic origin, another important variable for analysis, is present in all but one of the 46 UR databases. Looking at academic performance longitudinally, more than 95 percent of the databases contain detailed information on credit accumulation, and about three-quarters can supply statistics on cumulative grade

TABLE 2 — UR database coverage of key data elements

Data Element	UR databases		All states		States with databases	
	N	%	N	%	N	%
Demographics						
Sex	46	100.0	39	78.0	39	100.0
Race/ethnicity	46	100.0	39	78.0	39	100.0
Date of birth	46	100.0	39	78.0	39	100.0
Citizenship	33	71.7	29	58.0	29	74.4
Geographic origin	45	97.8	37	74.0	37	94.9
Disability status	15	32.6	13	26.0	13	33.3
Academic background						
Admissions test scores	25	54.3	23	46.0	23	59.0
High school attended	41	89.1	33	66.0	33	84.6
High school class size	5	10.9	5	10.0	5	12.8
High school rank	13	28.3	13	26.0	13	33.3
High school GPA	18	39.1	17	34.0	17	43.6
High school graduation date	35	76.0	29	58.0	29	74.4
Prior college attended	22	47.8	17	34.0	17	43.6
Transfer credit	23	50.0	23	46.0	23	59.0
Enrollment status						
Degree-seeking status	32	69.6	26	52.0	26	66.7
First term of academic history	23	50.0	20	40.0	20	51.3
Full-time/part-time	25	54.3	23	46.0	23	59.0
Program/major	46	100.0	39	78.0	39	100.0
High school concurrent flag	7	15.2	6	12.0	6	15.4
Joint enrollment flag	6	13.0	6	12.0	6	15.4
Distance ed/technology flag	7	15.2	7	14.0	7	17.9
Academic activity						
Term data collected	30	65.2	25	50.0	25	64.1
Term GPA	19	41.3	16	32.0	16	41.1
Term SCH attempted	30	65.2	26	52.0	26	66.7
Term SCH earned	20	42.6	17	34.0	17	43.6
Academic attainment						
Cumulative GPA	34	73.9	27	54.0	27	69.2
Cumulative SCH earned	45	95.7	38	76.0	38	97.4
Degree awarded	46	100.0	39	78.0	39	100.0
Total	**46**	**100%**	**50**	**100%**	**39**	**100%**

performance. Second, about two-thirds of current UR databases can track students from term to term as well as at annual snapshots — enabling detailed studies of such matters as "stop-out" behavior and term-to-term changes in major or academic performance.

Third, a substantial majority of UR databases can provide information about the high school experiences of incoming students. Almost 90 percent can identify the high school attended, and more than three-quarters contain information on the date of high school graduation. But information about academic performance in high school is not as readily available. Just over half of existing UR databases can provide admissions test information, and only about 40 percent contain a high school GPA; only a small minority maintain information on high school class size and student rank-in-class. Similarly, although more than 70 percent of the UR databases contain evidence of prior college-level work, either by listing a transfer institution or the number of transfer credits, only about half of them list both. If complete unit-record coverage of college and high school students were available, the absence of such elements documenting prior academic experiences would not be a problem because records on individual performance at different institutions could simply be linked. In the absence of such coverage, however, data of this kind would be useful.

Finally, existing UR database coverage is weak with respect to a number of useful data

TABLE 3 — UR database coverage of important combinations of key data elements

Data elements	UR databases		All states		States with UR databases	
	N	%	N	%	N	%
Set 1	46	100.0	39	78.0	39	100.0
Set 2	41	89.1	33	66.0	33	84.6
Set 3	45	97.8	38	76.0	38	97.4
Set 4	45	97.8	37	74.0	37	94.9
Set 5	39	84.7	32	64.0	32	82.1
Set 6	38	82.6	31	62.0	31	79.5
Set 7	12	26.1	12	24.0	12	30.8
Set 8	11	23.9	11	22.0	11	28.2

Set 1 = Sex, race/ethnicity, date of birth, degree awarded, program/major
Set 2 = Sex, race/ethnicity, date of birth, degree awarded, program/major, high school attended
Set 3 = Sex, race/ethnicity, date of birth, degree awarded, program/major, cumulative SCH
Set 4 = Sex, race/ethnicity, date of birth, degree awarded, program/major, geographic origin
Set 5 = Sex, race/ethnicity, date of birth, degree awarded, program/major, high school attended, cumulative SCH
Set 6 = Sex, race/ethnicity, date of birth, degree awarded, program/major, high school attended, cumulative SCH, geographic origin
Set 7 = Sex, race/ethnicity, date of birth, degree awarded, program major, transfer credit, prior college
Set 8 = Sex, race/ethnicity, date of birth, degree awarded, program/major, high school attended, cumulative SCH, geographic origin, transfer credit, prior college

elements. For example, only about 15 percent can identify high-school-concurrent students or can flag students who are enrolled in two or more postsecondary institutions simultaneously. (Note again that these elements would be unnecessary if full unit-record database coverage were in place nationally.) Similarly, about the same number (15 percent) can identify course work delivered through technology or at a distance — an increasingly important topic of state policy.

A more salient question, however, is the extent to which particular *combinations* of data elements are present in state-level UR databases — combinations that would enable specific types of reports to be generated. Table 3 (Page 22) provides results for a number of important combinations of data elements, with coverage statistics calculated in the same manner as those in Table 2. Table 4 (Pages 24 and 25) displays similar results broken down by individual UR database, presented on a state-by-state basis. An "X" entry in a given column in Table 4 indicates that all members of the particular data-element cluster are present and usable in the database indicated. Summary statistics at the bottom of Table 4 provide the proportion of national FTE and headcount enrollment that is therefore covered for this particular combination of data elements through state-level UR database records. Once again, it is important to note that researchers took a conservative approach in defining whether a given data element is present in a given database, so the statistics presented represent *minimum* estimates of the coverage of each data-element cluster.

- The most basic cluster (Set 1) consists of sex, race/ethnicity, date of birth, degree awarded and program/major. This combination of data elements makes it possible to calculate annual persistence and degree completion across institutions by academic program and for a range of important demographic subpopulations. All existing UR databases contain this combination, representing more than three-quarters of the states. Taken together, these databases represent, at minimum, a coverage of 69.4 percent of national FTE enrollment and 73 percent of national headcount enrollment (see Table 4).

- A second group of data element clusters (Sets 2-5) adds to Set 1 the elements needed to accomplish additional useful analyses commonly performed on longitudinal data. Set 2, for example, allows breakdowns of persistence and degree completion by high school. Two-thirds of the states and almost 90 percent of the UR databases documented can support such analyses, representing more than 55 percent of the nation's FTE and headcount enrollments. Set 3 substitutes Cumulative Student Credit Hours (SCH) for high school data, enabling detailed analyses on the effects of changes in full-time/part-time attendance patterns and information on satisfactory academic progress. Almost all UR databases contain this combination, representing more than two-thirds of national FTE and 70 percent of national headcount enrollments. Set 4 adds geographic origin to the basic mix and has about the same coverage as Set 3. Set 5 adds high school and cumulative SCH, allowing tracking of individual students from a given high school, into (and through) particular postsecondary programs, to eventual program completion. About 85 percent of existing UR databases can support such analyses, representing 32 states and covering well over half of the nation's FTE and headcount enrollments. Set 6 combines all eight data elements and performs almost as well, with coverage representing 53.2 percent

Only 15 percent of databases can identify course work delivered through technology or at a distance.

TABLE 4 — Coverage of important combinations of key data elements by UR database

State name	Agency responsible	Set:	1	2	3	4	5	6	7	8
Alabama	SHEEO agency		X	X	X	X	X	X	X	X
Alaska	State university system		X	X	X	X	X	X		
Arizona	SHEEO agency		X	X	X	X	X	X	X	X
Arkansas	SHEEO agency		X	X	X	X	X	X		
California	Community college system		X	X	X	X	X	X		
	University of California system		X	X	X	X	X	X		
	State university system		X	X	X	X	X	X	X	X
Colorado	SHEEO agency		X	X	X	X	X	X	X	X
Connecticut	[None]									
Delaware	[None]									
Florida	State university system		X	X	X	X	X	X	X	X
	Community college system		X	X	X	X	X	X		
Georgia	SHEEO agency		X	X	X	X	X	X	X	X
Hawaii	SHEEO agency		X	X	X	X	X	X	X	X
Idaho	SHEEO agency		X	X	X		X		X	
Illinois	SHEEO agency		X		X					
Indiana	SHEEO agency		X	X	X	X	X	X	X	X
Iowa	[None]									
Kansas	[None]									
Kentucky	SHEEO agency		X	X	X	X	X	X		
Louisiana	SHEEO agency		X		X	X				
Maine	SHEEO agency		X	X	X	X	X	X	X	X
Maryland	SHEEO agency		X		X	X				
Massachusetts	SHEEO agency		X	X	X	X	X	X		
Michigan	[None]									
Minnesota	SHEEO agency		X	X	X	X	X	X		
Mississippi	SHEEO agency		X	X	X	X	X	X		
Missouri	SHEEO agency		X	X	X	X	X	X		
Montana	[None]									
Nebraska	[None]									
Nevada	SHEEO agency		X	X	X	X	X	X		
New Hampshire	[None]									
New Jersey	SHEEO agency		X	X	X	X	X	X		
New Mexico	SHEEO agency		X	X	X	X	X	X		
New York	State university system (SUNY)		X	X	X	X	X	X		
	City university system (CUNY)		X	X	X	X	X	X		
North Carolina	Community college system		X	X	X	X	X	X		
	State university system		X	X	X	X	X	X		
North Dakota	SHEEO agency		X	X		X				
Ohio	Ohio Higher Education Information system (HEI)		X	X	X	X	X	X		

TABLE 4 — Continued

State name	Agency responsible	Set:	1	2	3	4	5	6	7	8
Oklahoma	SHEEO agency		X	X	X	X	X	X		
Oregon	Community college system		X	X	X	X	X	X		
	State university system		X	X	X	X	X	X	X	X
Pennsylvania	[None]									
Rhode Island	[None]									
South Carolina	SHEEO agency		X	X	X	X	X	X		
South Dakota	SHEEO agency		X	X	X	X	X	X	X	X
Tennessee	SHEEO agency		X		X	X				
Texas	SHEEO agency		X		X	X				
Utah	SHEEO agency		X		X	X				
Vermont	[None]									
Virginia	SHEEO agency		X	X	X	X	X	X		
Washington	Community college system		X	X	X	X	X	X		
West Virginia	SHEEO agency		X	X	X	X	X	X		
Wisconsin	Community college system		X	X		X				
	State university system		X	X	X	X	X	X		
Wyoming	Community college system		X	X	X	X	X	X		
Percent of national FTE coverage			69.4	55.6	67.4	65.8	53.6	53.2	15.7	15.3
Percent of national headcount coverage			73.0	58.8	71.1	69.0	56.8	56.4	16.7	16.3

Set 1 = Sex, race/ethnicity, date of birth, degree awarded, program/major
Set 2 = Sex, race/ethnicity, date of birth, degree awarded, program/major, high school attended
Set 3 = Sex, race/ethnicity, date of birth, degree awarded, program/major, cumulative SCH
Set 4 = Sex, race/ethnicity, date of birth, degree awarded, program/major, geographic origin
Set 5 = Sex, race/ethnicity, date of birth, degree awarded, program/major, high school attended, cumulative SCH
Set 6 = Sex, race/ethnicity, date of birth, degree awarded, program/major, high school attended, cumulative SCH, geographic origin
Set 7 = Sex, race/ethnicity, date of birth, degree awarded, program major, transfer credit, prior college
Set 8 = Sex, race/ethnicity, date of birth, degree awarded, program/major, high school attended, cumulative SCH, geographic origin, transfer credit, prior college

of FTE enrollment and 56.4 percent of headcount enrollment.

- A final group of data elements (Sets 7 and 8) adds information on prior postsecondary attendance. Set 7 provides additional information on transfer credit and prior college attended, thus enabling detailed longitudinal studies of transfer behavior. Only about one-fourth of current UR databases contain this cluster (though more than 70 percent contain one of the two transfer elements plus Set 1), representing more than 15 percent of national enrollment. Combining this cluster with the data elements contained in all previous sets (Set 8) yields only slightly less coverage — 11 databases in 11 states representing 15.3 percent and 16.3 percent of the nation's FTE and headcount enrollments, respectively.

Taken together, this range of coverage is encouraging. A solid majority of current state-level UR databases are capable, in principle, of supporting useful tracking studies across state lines. And at least two-thirds of the nation's enrollment is covered by UR databases that contain enough common data elements to support studies of retention and program completion at a level of sophistication that meets or surpasses those typically undertaken by individual institutions using their own registration and records systems.

- **Data element definitions.** A final important question about the suitability of state-level UR databases for supporting comprehensive studies of student progression and degree completion concerns the consistency of the definitions used. The fact that two different databases contain the same data element does not necessarily mean that they contain the same data. Further complicating the matter is whether compatible codes are used to identify the various values within a given data element. While recoding procedures can be used to assign common values or to concatenate data elements, the underlying data structure of the element must allow data-transformation procedures to be applied consistently. Because NCHEMS researchers requested full documentation of all UR databases, this matter could be investigated directly; most respondents provided details about the definitions employed for each data element and the coding structures used to store the data.

The fact that two different databases contain the same data element does not necessarily mean that they contain the same data.

As noted, about two-thirds of current state-level UR databases explicitly employ IPEDS definitions, wherever these apply. Twenty-nine of the 46 databases investigated (63 percent) reported that this was their policy, and direct inspection of individual data elements within those that did not report using official IPEDS definitions generally reveals a high level of conformity to those definitions. But these analyses also uncovered a good deal of detailed variation in the ways in which individual UR databases handled particular data elements. Overall results, though, suggest substantial compatibility among those data elements that appear most frequently. The most prominent examples are the following:

- **Basic demographics.** All of the state-level UR databases contain information on three basic student descriptors — sex, race/ethnicity and date of birth — with geographic origin approaching 100 percent. The manner in which these data are coded is sometimes different, however. Codes for sex, for instance, are sometimes numerical and sometimes alphabetical. And some states maintain an "unknown" category, while others do not. Race/ethnicity data generally follow federal IPEDS/Census categories, with all 39 cases for which full documentation was received following these procedures. Date of Birth was more variable in structure: nine databases report year of birth only, with the rest maintaining the full birth date (though coding layouts sometimes differ). Geographic origin was the most variable of these elements, with 14 databases reporting county of residence, eight ZIP code, and the balance a unique or unknown code. Despite these variations, this pattern favors compatibility. The majority of cases could be made compatible through straightforward recoding procedures.

- **Key performance outcomes.** As noted, almost all UR databases also contain information on degrees granted (100 percent) and cumulative credits earned (95.7 percent). But the actual data contained in the first element can vary greatly. For example, half of the 46 UR databases carry the level of the degree granted, following (or compatible with) IPEDS conventions and relying on a companion program/major code to supply the field of study. The other half carry the actual program code, or simply flag the record when a degree is awarded. However, all of these practices are compatible with what is ultimately needed: a simple identification of program completion. With regard to credits earned, compatibility is limited by differing academic calendars. Twenty-six of 46 UR databases employ a semester-based term structure, five use quarters, and the balance employ both annual and term-based reporting formats, depending on the data element in question. If annual reporting is all that is required, however, all of these schemes could be aggregated consistently for reporting purposes.

- **Program major.** All of the existing UR databases maintain this element, with the majority (27 of 46, or 58.6 percent) employing the IPEDS Classification of Instructional Programs (CIP) and an additional 13 using an unknown coding scheme. The other six databases employ a statewide classification of programs that is more detailed than, but basically compatible with, the IPEDS/CIP classification.

- **Prior institution.** Almost 90 percent of current UR databases contain information on high school attended, and almost half contain information on prior college attended. Both of these elements show similar patterns with respect to definitions and coding. With regard to high school, 14 databases use the College Entrance Examination Board (CEEB) code, while an additional 10 use a similar ACT code, with the balance using a locally developed list. With regard to prior college, most use the IPEDS/FICE code, while some employ an ACT code. All of these coding schemes can be easily mapped into one another via appropriate recodes.

In short, detailed examination of definitions and coding structures for the most common data elements revealed no barriers sufficient to prevent them from being linked to support comprehensive studies of student progression and program completion. But substantial recoding would be required to make diverse coding schemes consistent. To achieve reporting consistency, some concatenation to a more aggregate level of detail would also be required. For example, annual instead of term-by-term reporting on academic performance would be required to achieve consistency; establishing a level of aggregation for geographic origin to defined regions within states consisting of multiple counties or SMSAs would probably also be required. These efforts would take considerable time and effort, but none of these situations poses a major technical obstacle.

Challenges in using state-level unit-record databases

As previous sections of this report have made clear, there are relatively few *design* obstacles to employing state-level UR databases as the foundation for a more comprehensive system of student tracking and reporting. Such systems have impressive enrollment coverage, are reasonably similar in design, contain a sufficient mass of common data elements, and pose no insurmountable definitional or coding problems that would prevent their being used in this fashion. Nevertheless, other significant challenges must be addressed to make such a project feasible. Among the most prominent are those associated with privacy and security, and those associated with the technical feasibility of using a diverse array of independently governed state-level databases to establish a fully articulated data system.

- **Privacy restrictions.** Privacy policies on sharing educational record data are governed primarily by the Family Educational Rights and Privacy Act (FERPA), enacted by Congress in 1974 and administered by the Family Policy Compliance Office (FPCO) of the U.S. Department of Education. The act applies to all institutions that receive federal funds — K-12 and postsecondary, with the Secretary of Education empowered to withhold such funds if an institution is deemed not be in compliance. Basically, FERPA gives parents and eligible students a) the right to inspect educational records maintained by schools and b) the right to request that a school correct records believed to be in error. However, it also requires that a school receive written permission from a student or parent before releasing any information from a student's record. This last provision is what affects the ability to exchange individualized student record information from school to school or from database to database.

  Recognizing the need to share such information under many circumstances, FERPA does allow institutions to disclose student-record information without consent for a variety of reasons, including studies "to improve instruction," so long as "the study is conducted in a manner that does not permit personal identification of parents and students by individuals other than representatives of the

research organization" and "the information is destroyed when no longer needed for the purposes for which the study was conducted (34 CFR Part 99.31(6)(ii)(A-B))." Institutions may also disclose, without consent, "directory-type" information such as a student's name, address, date of birth, honors and awards, and dates of attendance. In such cases, institutions must tell parents and eligible students about the potential release of directory information and allow them reasonable opportunity to request that the institution withhold such information. This notification must occur annually and is usually discharged through such means as a catalog or student handbook.

Though apparently straightforward, FERPA provisions have been interpreted in many different ways when applied to the matter of linking student records electronically. More particularly, state-level interpretations of how to handle privacy rights for student records — usually offered by each state's attorney general (AG) — vary substantially. In the majority of cases, FERPA is not seen as standing in the way of limited record-linking for purposes of conducting in-state studies of student retention and completion. But in some cases (including a recent one in Oregon), an unfavorable AG's opinion can provide a major obstacle to creating a student-tracking database.

Other precedents, on balance, favor an interpretation of FERPA that is not antithetical to the use of state-level UR databases as a foundation for student tracking. For example, the NSC has been explicitly granted permission to use such data for student-tracking purposes by the FPCO, though it is careful to confine its disclosure to "directory-type" information. Definitions of "directory-type" information, in turn, broadly include the kinds of data elements that are usually present in state-level UR databases, such as date of birth, program/major, enrollment status and performance, and degrees granted. Whether they include common demographic descriptors such as sex, race/ethnicity, or geographic origin is less clear. Most damaging to the proposition of linking records across state lines is the fact that the definition of "directory-type" information under FERPA explicitly does *not* include identification numbers such as the SSN. As a result, organizations such as NSC, which operate under a narrow interpretation of FERPA's requirements, match records for student-tracking purposes by using complex combinations of student name, address and date of birth. On the other hand, the overwhelming majority of existing state-level UR databases have routinely linked student records drawn from multiple institutions using SSNs without interference from either the Secretary of Education or their own AGs. This is also true for the few cases of record-linking by state private college associations uncovered in this study. And a Supreme Court decision in June 2002 (*Gonzaga University vs. Doe*) held that students have no individual right to sue institutions under FERPA provisions; the only enforcement provision is therefore action to withhold Title IV funds by the Secretary of Education.

FERPA provisions have been interpreted in many different ways when applied to the matter of linking student records.

- **Use of the SSN.** The Social Security number was established by the Social Security Act of 1935 and was originally intended to be used only by the federal Social Security Program. In 1943, however, then-President Roosevelt issued an executive order (No. 9397) requiring federal agencies to use the SSN when creating

new records systems. The number is now in use by a wide range of agencies, including the Internal Revenue Service (IRS). The Privacy Act of 1974 (PL 93-579, Section 7) requires government agencies requesting SSNs to disclose to citizens the authority under which they are acting, the use that will be made of the information, and whether the disclosure is mandatory. It also allows agencies that were already using the SSN as a principal identifier in their databases to continue using it for this purpose.

As noted, the SSN is overwhelmingly used as a unique identifier for state-level UR database systems. Recently, however, its use for identification and record-linking purposes has come under prominent attack — both inside and outside the higher education arena. The principal root of this opposition is the conflicted role of the SSN, because it is employed as both a unique record identifier and as an actual proof of identity. The former role means that the number is often quite visible in documents of various kinds. The latter, however, requires far greater protection because those possessing the number can gain access to information that can lead to identity theft. Reacting to this threat, some higher education institutions (most visibly, the University of Illinois) are taking active steps to reduce their use of the SSN to gain access to offices and student records. This action reflects a trend in other sectors to eliminate display of the SSN on materials that are often viewed by third parties — for example, on driver's licenses or on medical insurance cards. But higher education institutions remain compelled to collect SSNs as part of a student's record for a number of reasons. Perhaps most important, the IRS requires institutions to report, by SSN, every tuition-paying student currently enrolled. Also, the SSN remains the primary form of identification in processing and tracking federal student loans. The SSN continues to be used as an identifier by other large and powerful organizations. The U.S. military, for instance, uses the number as a primary identifier for all civilian employees. Finally, since the terrorist attacks of September 11, 2001, there has been growing pressure to establish a national system of identification, and the only viable mechanism for this at the moment is the SSN.

Education institutions remain compelled to collect SSNs as part of a student's record for a number of reasons.

Clearly, the threat to the SSN as the primary national form of identification — and consequently, to more comprehensive record-linking capability — is serious. In fact, it probably constitutes the main challenge to the feasibility of establishing a broader student-tracking capability based on state-level UR databases. The main alternative is using a new student identification number created especially for (and limited exclusively to) linking student records across databases. Such a number could be kept secure and would not be used for verification of identity. In fact, a student might not even know that such a number existed. Indeed, the NSC already uses this process to keep track of students it has identified through its matching procedure using "directory-type" information. Similarly, several states have proposed assigning standard identification numbers to students enrolled in elementary and secondary schools — numbers that would follow them into postsecondary enrollment. The principal drawback of such an approach, though, is the need to obtain agreement among multiple database owners and administrators to maintain a common code. A variant of this approach might,

therefore, be to systematically recode the SSN itself, using several known but secure algorithms.

An alternative to a new common number is a matching procedure using directory-type information, such as the one employed by NSC. Organizations that have employed this method usually require a combination of at least three elements to uniquely identify an individual in two different databases. The problem here is that only one of the data elements typically employed to match records in this fashion — name, telephone number, address and date of birth — is contained in more than a handful of existing state-level UR database systems.

- **Technical capacity.** The most recent data on student enrollments (IPEDS, Fall 2000) shows a national headcount in degree-granting colleges and universities of 13,505,760. Data on 9,861,221 of these students (73 percent) are currently available for the five core data elements noted earlier through state-level UR databases. National transcript studies — as well as state-level experience in tracking students in public higher education systems — suggest that a tracking period of ten years will be required to allow sufficient time for most students to complete postsecondary programs (Adelman 1999). Given an annual extract from existing UR databases that could be linked to create a longitudinal record, this 10-year tracking period would yield a database containing approximately 135 million year-end records. The size of these records individually would remain small because they would contain only a few data elements. Assuming the inclusion of all 29 data elements examined in the NCHEMS study, for example, a record length of approximately 75 bytes would be typical. For the most inclusive combination of frequently occurring data elements examined (Set 8), record lengths would be approximately 35 bytes. The resulting dataset, while large, would be comparable to existing commercial banking databases, health insurance records, or for that matter, federal student loan records. (For purposes of direct comparison, for example, NSC operates a national database of some 50 million records of approximately this size.)

A second important technical challenge is linking databases for purposes of aggregating records. The most straightforward option here involves creating a standard extract record using common definitions and codes for a limited set of data elements (such as the 29 examined in the NCHEMS study). This method would work similarly to the way individual state-level UR databases now operate with respect to institutions. An annual extract would be taken from each participating state-level UR database and placed in a third-party data file for aggregation, with a common identification number used to match cases. In order to create these extracts, UR database administrators would need to recode the selected data elements to fit the established standard.

A more complex option would be for each state-level UR database to create a limited-access historical file available to approved researchers. This file would contain selected data elements as above, but would be maintained by the states themselves in their own formats. Approved users could then gain access to these databases using a gateway configured to convert selected data elements to a common coding standard. Using this gateway, researchers could use as many databases as are relevant to the question they are asking. This alternative would be easier for state UR database administrators to maintain and would obviate the need for a large third-party database such as that created by the NSC. But it would require a carefully designed mechanism — one that would allow access to and distribution of

state-level data and would convert that data to a common standard. One example of such a mechanism is the IMS Enterprise Specification, which was developed originally for distance-education settings. It shares data about learners and academic performance across differing platforms and interfaces (ANSI TS 130 Educational Record: www.imsglobal.org/enterprise/entv1p1/imsent_bestv1p1.html).

These challenges can all be overcome, but they will require both significant thought and up-front investment. Also, cutting across all of them are questions about leadership for such an enterprise and about its ultimate governance and control. Those responsible for administering dozens of discrete state and system UR databases will need to be persuaded that the resulting increase in student-tracking capacity will be worth the costs of establishing and maintaining the required extracts or gateways. Probably more important, they will need to be convinced that FERPA issues are fully addressed and the resulting data are secure. How such support might be built and how the enterprise would ultimately be governed are topics beyond the scope of this feasibility report. But it will clearly be important to attend to them.

Alternative methods for tracking students' progress nationally

State-level UR databases are not the only possible vehicle for tracking student progression and program completion more comprehensively. Indeed, some methods already exist for doing so, and their potential should be analyzed briefly as alternatives to linking state-level UR databases. Even if these options ultimately prove less capable, they may provide an important interim or supplementary capability, given the current incomplete coverage of UR databases (particularly with regard to students enrolled in private institutions).

- **The National Student Clearinghouse.** NSC is a nonprofit association begun in 1993 by lenders, guarantors and other members of the federal student loan system to facilitate and streamline the student record verification process. It provides this service on a fee basis for a range of institutions and individuals, including colleges and universities, students and alumni, lending institutions, and employers (see www.nslc.org). NSC compiles electronic student records directly from institutions — a procedure that permits institutions and individuals to verify current student enrollment and degree status as well as federal student loan information. More than 2,700 postsecondary institutions provide regular student record updates, representing 86 percent of the nation's higher education headcount enrollments. On behalf of colleges and universities, NSC's core service ("EnrollmentVerify") also provides guaranty agencies with status and deferment information on student financial aid recipients. NSC provides two other services: 1) degree verification service, "DegreeVerify," and 2) an enrollment search service, "EnrollmentService."

  - **EnrollmentVerify Service.** This service allows institutions to outsource requests for enrollment verification from third parties seeking such information. Health insurers, employers, credit agencies and background screen companies, among others, are instructed to contact NSC for this information rather than calling the institutions. The institutions that register with the Clearinghouse provide eleven student data elements every 40 to 50 days, including school and branch code (DOE FICE code), name, birth date, SSN,

enrollment status (full time, half time, less than half time, leave of absence, withdrawn, graduated, deceased), start date of current status (assumed to be the term-begin date for full-time students and calculated by NSC for students with less than full-time status), permanent address, anticipated graduation date (based on institution's average student graduation date), term-begin date (first day of classes), term-end date (last day of exams), and a data block indicator (which informs NSC when students have exercised their right under FERPA to block the release to third parties of their names and/or dates of attendance). Three optional data elements are also included: previous name, previous SSN and graduate level indicator (which identifies those students who have been exclusively enrolled in graduate-level course work during the current calendar year).

NSC adheres strictly to FERPA guidelines regarding the release of student data.

- **DegreeVerify service**. The DegreeVerify service provides degree-conferral information to employers, background search firms and recruiters on behalf of the 275 institutions now enrolled in this service. Nine data elements are required, including school code, SSN, first name, last name, birth date, degree title, date degree awarded, major course of study and FERPA Block. NSC also requests 18 optional data items, including middle name, name suffix, previous last and first name, degree-level indicator, school/college/division awarding degree, joint institution/college/school name, additional major courses of study, minor courses of study, major options, major concentrations, NCES CIP codes, academic honors, honors program, other honors, attendance-from and -to dates, school financial block (institution will not verify degree information due to outstanding student financial obligations), and institution granting degree (if different from current institution).

- **EnrollmentSearch**. EnrollmentSearch is a collection of search engine tools that supports queries of the 50 million records that constitute NSC's student-record database. A variety of enrollment-management studies can be conducted on former or prospective students, previously enrolled students, applicants and currently enrolled students. Institutions can determine where students enroll after they have declined admission to their institution or have transferred, dropped out or graduated. EnrollmentSearch queries cannot obtain any information that is not considered "directory" information under FERPA guidelines.

- NSC adheres strictly to FERPA guidelines regarding the release of student data. The Family Policy Compliance Office (FPCO) has determined that FERPA permits schools to appoint the Clearinghouse as their agent to release Social Security numbers and educational information of all enrolled students, not just financial aid recipients. FPCO has also concluded that the Clearinghouse's EnrollmentVerify, DegreeVerify and EnrollmentSearch services do not violate FERPA.

- **SPEEDE/ExPRESS**. In the late 1980s the National Center for Education Statistics (NCES) recognized the need for timely, uniform, high-quality data about higher education. The Hawkins-Stafford Education Improvement Amendments of 1988 called for the creation of a National Cooperative

Education Statistics System to be overseen by NCES and coordinated through the states. The purpose of this system was to " ... improve the comparability, quality, and delivery time of data collected for measuring the condition of education in the United States (www.nces.ed.gov/edi/speedeExp.asp)." Congress also instructed the NCES commissioner to create and implement "standards for education data collection, processing, analysis, and reporting." At the same time the Postsecondary Electronic Standards Council, in cooperation with the American Association of Collegiate Registrars and Admissions Officers (AACRAO), developed a national standard format for electronic transcripts — what is now known as the Standardization of Postsecondary Education Electronic Data Exchange (SPEEDE) and Exchange of Permanent Records Electronically for Students and Schools (ExPRESS) Project. SPEEDE/ExPRESS represents the combined efforts of many organizations focused upon the development of the American National Standards Institute Accredited Standards Committee (ANSI ASC X12) Electronic Data Interchange Standards for Education. The goal of the standards is to help all sectors of education transmit student academic records electronically. By 1992, four standards were developed:

(1) Student Education Record (Transcript), which transmits student records electronically between educational agencies and institutions. A transcript typically comprises personal history and identifying information about the student, the current academic status, dates of attendance, courses completed with grades earned, degrees and diplomas awarded, health information (Pre-Kindergarten through Grade 12 only), and testing information.

(2) Student Educational Record (Transcript) Acknowledgement, an automated acknowledgment of receipt of a student record. This allows the receiving institution to determine whether the transcript was sent by the appropriate office at a given institution and permits the sending institution to determine whether and when the transcript was received.

(3) Request for Student Educational Record (Transcript), an automated request for student records.

(4) Response to Request for Student Educational Record (Transcript), an automated response to a request for a Student Educational Record if the institution is not able to respond with a student transcript immediately and when it might be expected to send one.

Additional transaction datasets are also supported by the SPEEDE Committee of the Postsecondary Electronic Standards Council. These include an educational course inventory and an application for admission to educational institutions. In addition, several student financial aid transaction sets are also being developed under ANSI standards. These include a student loan application, student loan guarantee result, student loan transfer and status verification, and student loan pre-claims and claims.

Institutions using SPEEDE/ExPRESS claim many advantages. They say the system's electronic data interchange (EDI) software:

- Allows institutions to map locally defined data onto the standard definitions.
- Increases the timeliness of shared information by decreasing transmittal time.
- Reduces operation costs by automating the transmission and receipt of student academic information.

- Improves the accuracy of information by reducing human intervention in the process of transmittal.
- Provides uniform and comparative data.

The National Student Clearinghouse and SPEEDE/ExPRESS provide substantial capabilities for student tracking that operate in ways that are fundamentally different from those provided by state-level UR databases. NSC is based on a limited, but known, set of data elements that provide a useful basis for determining whether students starting their postsecondary education at a given institution continued to pursue it at another, and whether they ultimately completed their programs. Based on institution-supplied demographic data on the members of a given cohort of starting students, analytical files can be assembled to track different kinds of students and to compare them with respect to persistence and completion. Moreover, a national infrastructure for accomplishing this task is already in place. Many institutions and state systems now use NSC's services to determine if former students have continued their education elsewhere and/or moved out of state. But the NSC database contains only limited demographic data and relatively little information about the details of enrollment or academic performance — for example, it does not contain credit-hour loads or GPA. At the same time, the national enrollment coverage of the NSC database, while slightly exceeding that of current state-level UR databases, is far from universal. Also, the intent and architecture of the NSC means that it will not likely be expanded to include increasingly greater amounts of transcript-level detail. And its semi-commercial status, together with its explicit ties to the student loan system, render it in many ways unsuitable as the foundation for a more comprehensive approach for tracking students.

SPEEDE/ExPRESS can provide an unusually rich array of information about academic activities and outcomes.

SPEEDE/ExPRESS, meanwhile, represents an opposing set of virtues and drawbacks. Because it is a medium of exchange, not a database, it depends on a third party to aggregate, maintain and communicate academic records across institutions. To date, the institutions using this medium to track students have had to establish their own regional consortia to facilitate the needed transactions (e.g., Green 1995). On the other hand, SPEEDE/ExPRESS formats can accommodate highly detailed information about student performance in different institutional settings, down to the individual course level. SPEEDE/ExPRESS can therefore provide an unusually rich array of information about academic activities and outcomes compared with the typical contents of state-level UR databases. The fact that SPEEDE/ExPRESS represents an established data standard for exchange and reporting in areas not yet covered by state-level UR databases, though, suggests an important future direction: Wherever possible, such databases should abide by SPEEDE/ExPRESS definitions and calculation conventions when adding new data elements.

Recommendations and conclusions

The results of this analysis suggest a number of recommendations and conclusions:

1. Current state-level UR database capabilities provide considerable potential for supporting an expanded and more comprehensive capacity to track student retention and program completion. Thirty-nine of the fifty states now maintain such databases, covering more than two-thirds of the nation's FTE and almost three-quarters of its headcount enrollments. Coverage of such systems is expanding, especially with regard to private institutions — one of the principal limitations of current systems. Virtually all have been in existence long enough to generate meaningful statistics about persistence and program completion, and virtually all contain enough data elements in common to track important demographic and behavioral groups.

2. State-level UR databases, despite their content and coverage, should be supplemented by additional methods to track students. The National Student Clearinghouse represents the most prominent of these methods, containing basic enrollment and degree records for more than 80 percent of the nation's colleges and universities. Many of these are private or are located in states that currently lack a UR database capability. Independent college consortia or statewide associations represent another approach, although one that is just getting started. Working together, organizations such as NSC, institutional consortia, and state-level UR database administrators could constitute a powerful and collaborative national resource.

3. An effort should be undertaken to develop common reporting standards for a key set of data elements maintained by most state-level UR databases. These standards should include both common definitions and common coding structures for maintaining and exchanging data. Definitions and coding structures should first be developed so they are compatible with IPEDS and SPEEDE/ExPRESS conventions. The NCES/SHEEO network may be particularly helpful in establishing and maintaining such standards. In cases where particular data

An effort should be undertaken to develop common reporting standards.

elements are not addressed, other frequently used data standards should be sought, such as the Common Data Set. Two clusters of data elements should be created and defined in this manner. A "base" set should include data elements already maintained by a majority of state-level UR databases including sex, race/ethnicity, date of birth, geographic origin, program/major, high school attended, degree awarded, cumulative credits attempted, cumulative credits earned, and cumulative GPA. An "expanded" set would add admissions test scores, high school GPA, a joint-enrollment flag (differentiating concurrent high school and/or college enrollment), and a distance-education/technology flag. All would be constructed to be aggregated on an annual snapshot basis.

4. A new unique identifier should be developed to link postsecondary enrollment records across data systems. Current objections to the public use of the Social Security number (SSN) suggest that it is unwise in the long run to continue to rely on this identifier in its current form. The most promising alternative is to create a standard method for encoding the SSN for record-linking purposes, based on the procedures now used by a number of states. This procedure, and the resulting master codes, should be kept secure within the systems maintained by each state.

5. The preferred architecture for linking state-level UR databases is to establish a common gateway into historical records maintained independently by each state or system. This gateway would contain the data-transformation routines needed to convert the contents of each data element in the basic and expanded sets noted above into a common format by means of an encoded identification number. The principal alternative to this architecture is to establish a separate database containing pooled enrollment records maintained by a third party. This third party would receive annual extracts of data contained in state-level UR databases in a standard format for the base and expanded data element sets. It would then merge these data elements by means of an encoded identification number and conduct appropriate large-scale analyses of patterns of persistence and of program completion.

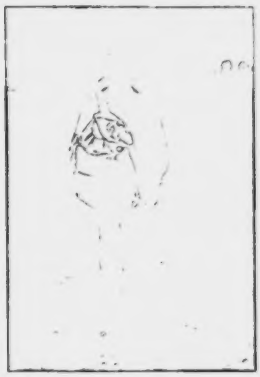
6. Participation in any data-sharing systems of this kind should be pursued on a voluntary basis. Using the first architecture, for example, only geographically contiguous states may initially choose to participate, in order to track students and graduates into regions where former students most frequently move — much as the Washington Community and Technical College system now does. Additional states and systems might join later to expand coverage. What is needed now to support such exchanges, however, is a common structure for coding and definition; this will enable future expansion to proceed on a consistent basis.

State-level UR databases are a valuable asset for developing a collective capacity to consistently determine rates of persistence and program completion — an effort that is growing in importance because of the increasingly volatile patterns of postsecondary enrollment across institutions and states. These databases contain a wealth of valuable information and provide an alternative to creating new national data-collection and reporting mechanisms. The principal obstacles to using this asset for broader purposes are political and organizational, not technical. Standard definitions and approaches to record-linking, though they pose substantial challenges and have yet to be developed, do not present insurmountable barriers.

Endnotes

[1] It is important to note that this distinction does not always hold: In Wisconsin, for example, two-year branch campuses of the University of Wisconsin are included with four-year institutions, while the state's technical college system has its own UR database system. In New York, separate UR databases are maintained by the SUNY and the CUNY systems, both of which contain both two-year and four-year campuses.

[2] In states where community college or vocational systems maintain UR databases separately from four-year systems, generally only the former have any experience with UI wage-record linking.



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Appendices

A note on acronyms: This report and its appendices employ several acronyms, some of which may be unfamiliar to some readers. Though care is taken to spell out and define acronyms in the main text of the report, the repetitive nature of the appendices makes such an effort counterproductive. This glossary should serve to aid readers' full understanding of the appendices.

- AACRAO — American Association of Collegiate Registrars and Admissions Officers
- CEEB — College Entrance Examination Board
- FERPA — Family Educational Rights and Privacy Act
- FICE — Foundations in Continuing Education
- FTE — full-time enrollment or full-time equivalent
- FTP — file-transfer protocol
- FY — fiscal year
- GED — General Educational Development (Testing Service)
- GPA — grade-point average
- IPEDS — Integrated Postsecondary Education Data System
- IPEDS-GRS — IPEDS' Graduation Rate Survey
- JCAR — Joint Commission on Accountability Reporting
- NCES — National Center for Education Statistics
- NCHEMS — National Center for Education Management Systems
- NSC — National Student Clearinghouse
- PDF — portable document format
- SCH/SSCH — student credit hours/student semester credit hours
- SDF — student data file
- SPEEDE/ExPRESS — Standardization of Postsecondary Education Electronic Data Exchange/Exchange of Permanent Records Electronically for Students and Schools
- SREB — Southern Regional Education Board
- SSN — Social Security number
- SUR — student unit record
- UI — unemployment insurance
- UR — unit record
- URS — unit-record system
- VTEA — Vocational and Technical Education Act

Appendix A: Student unit-record database question protocol

History

1) When was the student unit-record (SUR) system established?
2) By whom?
3) For what purpose (e.g., resource allocation/funding formula, IPEDS, tracking student retention/ graduation, tracking students across institutions)?

Coverage

1) Which institutions are included?
2) Are any independent institutions included? If so, how many or what percentage?
3) Are there any plans for expanding the system's coverage in terms of institutions?
4) When are data collected (e.g., Term (quarter, semester, other), Annual, Census only, End of Term, etc.)? Are any other reporting cycles used?
5) Are there plans to collect the data more frequently?

Reporting

1) What kinds of statistics and reports are produced regularly by the SUR? Can we get copies of these reports?
2) If graduation and retention reporting is done, how is it calculated — 4-year, 5-year, 6-year?
3) If it is a state-level system, how does the state use the data?

Data Management Issues

1) Can campuses access the datasets themselves? If so, who has access?
2) Are SSNs used?
3) Who has the authority to change data elements and definitions?
4) How are security and FERPA issues handled?
5) Do you cooperate with other (neighboring) states to share data? If so, please explain.
6) Do you link the SUR to other databases (e.g., High School URS, UI Wage records, other)?

Appendix B: Core data elements inventoried in the NCHEMS study

DEMOGRAPHICS

Sex

Definition: A code indicating the sex of the student (IPEDS).

Purpose: To allow appropriate disaggregation of data.

Rationale: Required sub-population in IPEDS and other standard external reports.

Race/ethnicity

Definition: Codes that represent the racial and/or ethnic background of a student (IPEDS/Census).

Purpose: To allow appropriate disaggregation of data.

Rationale: Required sub-population in IPEDS and other standard external reports.

Date of birth

Definition: A code indicating the date of birth of the student (IPEDS/Census).

Purpose: To calculate the age of the student and therefore allow for appropriate disaggregation of data.

Rationale: Important element in defining "nontraditional" attenders.

Citizenship

Definition: A code that identifies the status of the student with respect to U.S. citizenship, including Resident Alien and Non-resident Alien status (IPEDS/Census).

Purpose: To allow appropriate disaggregation of data.

Rationale: Required sub-population in IPEDS; allows exclusion of foreign nationals from other student populations and/or explicit tracking of foreign nationals.

Geographic origin

Definition: A code representing the geographic location in which the student originally resided on first attendance at the institution. Typically a county code or a ZIP (postal) code. Includes country of origin for foreign students.

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Purpose: To allow appropriate disaggregation of data.

Rationale: Allows tracking of students across state boundaries and within regions of a state.

Disability status

Definition: A code used to designate any disability, handicap, or impairment that requires special arrangements for a student to complete a program of study (SPEEDE/ExPRESS).

Purpose: To allow appropriate disaggregation of data.

Rationale: Sub-populations involving disabilities that receive support often require the preparation of status reports on academic progress. Students with disabilities may require special services or greater-than-normal times to complete academic requirements.

ACADEMIC BACKGROUND

Admissions test scores

Definition: The score(s) obtained by a student seeking admission to the institution on applicable college entrance examinations (e.g., SAT, ACT).

Purpose: To allow appropriate disaggregation of data and serve as a control variable.

Rationale: Previous academic background is an important predictor of the completion of a college program.

High school attended

Definition: The high school (or equivalent) most recently attended by the student prior to entry into the institution. GED is typically included as a category (CEEB/ACT codes).

Purpose: To allow appropriate disaggregation of data.

Rationale: Reflects state requirements and local imperatives to provide feedback on student performance at the postsecondary level to the secondary school that the student most recently attended.

High school class size

Definition: The number of graduates in the student's high school graduating class.

Purpose: To allow appropriate disaggregation of data and serve as a control variable.

Rationale: Size of high school is typically related to the diversity and breadth of the high school curriculum to which the student may have been exposed; used in conjunction with rank in class, allows an additional measure of student academic preparation.

High school class rank

Definition: The ordinal rank achieved by the student in his or her graduating high school class based on academic performance.

Purpose: To allow appropriate disaggregation of data and serve as a control variable.

Rationale: In combination with High School Class size, provides an additional measure of student academic preparation and aptitude, which are often related to the completion of a collegiate program.

High school GPA

Definition: The grade-point-average achieved by the student in high school (SPEEDE/ExPRESS).

Purpose: To allow appropriate disaggregation of data and serve as a control variable.

Rationale: Provides an additional measure of student academic preparation and aptitude, which are often related to the completion of a collegiate program.

High school graduation date

Definition: The month and year of the receipt of the student's high school diploma (or its equivalent) including the award date for a GED.

Purpose: To allow appropriate disaggregation of data and serve as a control variable.

Rationale: The length of time between secondary preparation and enrollment in college is often a significant factor in predicting postsecondary persistence and program completion.

Prior college attended

Definition: The postsecondary institution (if any) most recently attended by the student prior to entry into the current institution (IPEDS Unit ID or FICE).

Purpose: To allow appropriate disaggregation of data and serve as a control variable.

Rationale: Prior college attendance significantly affects rates of persistence and the amount of academic work that is required for a student to complete his or her current academic program.

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Appendix B: Core data elements inventoried in the NCHEMS study (continued)

Transfer credit

Definition: The number of credits earned at other institutions officially accepted by the institution in which the student is currently enrolled that count toward completion of the student's current program of study (SPEEDE/ExPRESS). May include credits earned through previous college work or a variety of other means, such as Advanced Placement (AP), college-level examination (e.g., CLEP, PEP), military credits, or credit based on assessment of prior learning, converted to the institution's own local credit equivalencies.

Purpose: To allow appropriate disaggregation of data and serve as a control variable.

Rationale: The amount of transfer credit significantly affects the amount of academic work that is required for a student to complete his or her current academic program and has a consequent impact on time to degree.

ENROLLMENT STATUS

Degree-seeking status

Definition: A code indicating the student's matriculation status with respect to a postsecondary program (IPEDS).

Purpose: To allow appropriate disaggregation of data and serve as a control variable.

Rationale: Many students earn postsecondary credits without an intention to earn a degree (especially at two-year institutions); allows these students to be included or excluded from studies of persistence and completion as appropriate.

First term of academic history

Definition: The term and academic year (or enrollment period) in which the student first enrolled for degree credit at the institution. Should correspond to the first term that the student appeared on the institution's records at enrollment census date as attempting one or more credits, and need not be the student's official admit term.

Purpose: To establish the start point for cohort tracking in calculating persistence rates, graduation rates and time to graduation, as appropriate.

Rationale: Students often stop out of programs and must be re-admitted through the regular admissions process; provides a more accurate start point for longitudinal tracking.

Full-time/part-time

Definition: A code indicating whether the student is enrolled for a full-time or a part-time credit load in the current enrollment period (IPEDS).

Purpose: To allow appropriate disaggregation of data and serve as a control variable.

Rationale: Student progress toward a degree is markedly affected by the number of enrolled credits in each period of enrollment.

Program/major

Definition: The academic program in which the student is currently enrolled, typically based on the Classification of Instructional Programs (CIP).

Purpose: To allow appropriate disaggregation of data.

Rationale: Allows differential statistics on persistence and completion to be calculated by discipline; also allows the impact of change in program to be investigated.

High school concurrent flag

Definition: A code indicating that the student is enrolled in high school at the same time as he or she is enrolled at the postsecondary institution.

Purpose: To allow appropriate disaggregation of data.

Rationale: Increasing numbers of students are concurrently enrolled in high school and college; allows these students to be isolated for analysis of effects on persistence and completion.

Joint enrollment flag

Definition: A code indicating that the student is enrolled at more than one postsecondary institution during the enrollment period.

Purpose: To allow appropriate disaggregation of data.

Rationale: Increasing numbers of students are concurrently enrolled in more than one institution; allows these students to be isolated for analysis of effects on persistence and completion.

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Appendix B: Core data elements inventoried in the NCHEMS study (continued)

Distance education/technology flag

Definition: A code indicating that the student is enrolled for all of his or her current credits through distance education, courses delivered via technology, or other means of delivery that are not face-to-face, classroom-based.

Purpose: To allow appropriate disaggregation of data.

Rationale: Increasing numbers of students are studying at a distance or via technology; allows the impact of this means of attendance to be analyzed in terms of impacts on persistence and completion.

ACADEMIC ACTIVITY

Term data collected

Definition: A code indicating the academic year and term (or enrollment period) to which all other academic activity data elements apply. Should correspond to the institution's own academic calendar, but must aggregate consistently to an academic year as reported for IPEDS purposes.

Purpose: To identify accompanying academic activity data elements.

Rationale: Supports detailed studies of academic activity and performance.

Term GPA

Definition: The grade-point average earned by the student for courses taken during the term (SPEEDE/ExPRESS).

Purpose: To track academic performance.

Rationale: Supports detailed studies of academic performance.

Term SCH attempted

Definition: The total number of academic credits that a student is enrolled for during a particular term (SPEEDE/ExPRESS).

Purpose: To track academic activity and performance.

Rationale: Supports detailed studies of academic activity and performance.

Term SCH earned

Definition: The total number of academic credits that a student successfully completed during a particular term (SPEEDE/ExPRESS).

Purpose: To track academic activity and performance.

Rationale: Supports detailed studies of academic activity and performance.

ACADEMIC ATTAINMENT

Cumulative GPA

Definition: The cumulative grade-point average earned by the student for courses taken at the institution since the First Term of Academic History (SPEEDE/ExPRESS).

Purpose: To track academic performance.

Rationale: Basic indicator of overall academic performance.

Cumulative SCH earned

Definition: The cumulative number of academic student credit hours that a student successfully completed for courses taken at the institution since the First Term of Academic History (SPEEDE/ExPRESS).

Purpose: To track academic activity and performance.

Rationale: Basic indicator of overall academic activity and performance.

Degree awarded

Definition: A code indicating that the student has completed a particular postsecondary program of study (IPEDS).

Purpose: To indicate program completion.

Rationale: Basic indicator of student performance.

Appendix C
Descriptions of individual state-level unit-record databases

Alabama Student Unit Record System

History

1) When was the student unit-record (SUR) system established?
1996.

2) By whom?
Alabama Legislature.

3) For what purpose (e.g., resource allocation/funding formula, IPEDS, tracking student retention/graduation, tracking students across institutions)?
High school tracking, retention, graduation, and tuition/residency.

Coverage

1) Which institutions are included?
Public colleges and universities.

2) Are any independent institutions included? If so, how many or what percentage?
None.

3) Are there any plans for expanding the system's coverage in terms of institutions?
We have invited the private institutions and would welcome their participation — so far they're not interested.

4) When are data collected (e.g., Term (quarter, semester, other), Annual, Census only, End of Term, etc.)? Are any other reporting cycles used?
Enrollment data is gathered each term — completions data is gathered once a year.

5) Are there plans to collect the data more frequently?
Not at this time.

Reporting

1) What kinds of statistics and reports are produced regularly by the SUR? Can we get copies of these reports?
The Tuition/Residency and Retention reports are posted on our Web site at www.ache.state.al.us. Go to Student Database via selections on the left side of the home page—reports are at the bottom of the Student Database page.

2) If graduation and retention reporting is done, how is it calculated—4-year, 5-year, 6-year?
(No response.)

3) If it is a state-level system, how does the state use the data?
Our files are still in their infancy — our first enrollment data is Fall 1998 — we just gathered our first unit record completions data for 2000-2001. We do generate ad hoc reports as requested, but so far, there has been no major push from politicians. They're starting to ask questions about what we have available — I'm sure they'll start asking for reports soon.

Data Management Issues

1) Can campuses access the datasets themselves? If so, who has access?
No — only a few staff have access to unit records. Institutions can request ad hoc reports, but those are only reported in aggregate format.

2) Are SSNs used?
We encrypt SSNs — encryption routine is on the website.

3) Who has the authority to change data elements and definitions?
ACHE staff works with a committee of institutional representatives (as required by legislation). The ACHE executive director has final authority on record layout and data elements.

4) How are security and FERPA issues handled?
Very carefully --- we don't release any unit's records, and we only release aggregate reports.

5) Do you cooperate with other (neighboring) states to share data? If so, please explain.
Not at this time, but it's a possibility in the future.

6) Do you link the SUR to other databases (e.g., High School URS, UI Wage records, other)?
We don't physically link the SUR to any other databases; however, we do run a crossmatch of High School files against the SUR data for reporting purposes.

University of Alaska System Data Warehouse

History

1) When was the student unit-record (SUR) system established?
1997.

2) By whom?
Statewide Institutional Research.

3) For what purpose (e.g., resource allocation/funding formula, IPEDS, tracking student retention/graduation, tracking students across institutions)?
Internal and external reporting are compiled from the database, including IPEDS and other surveys, retention and graduation rates, factbooks and ad hoc queries.

Coverage

1) Which institutions are included?
All campuses in the University of Alaska system are included.

2) Are any independent institutions included? If so, how many or what percentage?
No.

3) Are there any plans for expanding the system's coverage in terms of institutions?
No.

4) When are data collected (e.g., Term (quarter, semester, other), Annual, Census only, End of Term, etc.)? Are any other reporting cycles used?
Student data are collected approximately three weeks after classes have begun each fall and spring semester and approximately four weeks after those semesters have concluded. In addition, summer semester data is collected approximately four weeks after the summer semester has ended.

5) Are there plans to collect the data more frequently?
No.

Reporting

1) What kinds of statistics and reports are produced regularly by the SUR? Can we get copies of these reports?
Regular reports can be found on the Web site: http://www.alaska.edu/oir/. These included an annual factbook, IPEDS surveys, campus profiles, vocational education reporting with the state department of labor, opening semester reports and others.

2) If graduation and retention reporting is done, how is it calculated — 4-year, 5-year, 6-year?
Six-year.

3) If it is a state-level system, how does the state use the data?
(No response.)

Data Management Issues

1) Can campuses access the datasets themselves? If so, who has access?
All campuses and their employees, within the security class, that work with the student data and reporting have access to the data.

2) Are SSNs used?
SSNs are used when sending data for matching the state Department of Labor databases and the National Student Loan Clearinghouse database.

3) Who has the authority to change data elements and definitions?
Statewide Institutional Research.

4) How are security and FERPA issues handled?
Only employees within the security class that is authorized to access student data are able to view the data. Students are able to indicate if they want their information kept confidential, and an indicator to that effect is placed on their record.

5) Do you cooperate with other (neighboring) states to share data? If so, please explain.
No.

6) Do you link the SUR to other databases (e.g., High School URS, UI Wage records, other)?
No.

Arizona State System for Information on Student Transfer (ASSIST)

History

1) When was the student unit record (SUR) system established?
In 1998 (although a statewide community college unit record database was already in place before that).

2) By whom?
The Arizona State Legislature, as recommended by the Transfer Articulation Task Force.

3) For what purpose (e.g., resource allocation/funding formula, IPEDS, tracking student retention/graduation, tracking students across institutions)?
To assess the effectiveness of a new transfer model and to track students across institutions.

Coverage

1) Which institutions are included?
Arizona university system (AUS) and Arizona community college system (AZCC).

2) Are any independent institutions included? If so, how many or what percentage?
No.

3) Are there any plans for expanding the system's coverage in terms of institutions?
No.

4) When are data collected (e.g., Term (quarter, semester, other), Annual, Census only, End of Term, etc.)? Are any other reporting cycles used?
Collected each term for universities and annually for community colleges (community college file includes both term and academic year data).

5) Are there plans to collect the data more frequently?
No.

Reporting

1) What kinds of statistics and reports are produced regularly by the SUR? Can we get copies of these reports?
IPEDS GRS, Carl Perkins report, university system persistence/graduation rates (institutional reports only), miscellaneous enrollment, transfer, and graduation reports. Sample reports can be obtained, if available.

2) If graduation and retention reporting is done, how is it calculated — 4-year, 5-year, 6-year?
Six-year.

3) If it is a state-level system, how does the state use the data?
ASSIST is not a state system-level database; it provides institutional data only.

Data Management Issues

1) Can campuses access the datasets themselves? If so, who has access?
Yes, but campuses can access data for their students only. At this time, only institutional researchers.

2) Are SSNs used?
Only for data submission, to be used in a matching process which assigns an anonymous ID.

3) Who has the authority to change data elements and definitions?
APASC, with recommendations from the ASSIST Steering Committee.

4) How are security and FERPA issues handled?
Security plan is enforced, which includes signed agreements among the governing boards, participating institutions, and any individual with a user account. The agreements also place restrictions on the use of data and who can access the data. All personally identifiable data are removed from the database to which institutions have access and retained on a secured server behind a firewall.

5) Do you cooperate with other (neighboring) states to share data? If so, please explain.
No.

6) Do you link the SUR to other databases (e.g., High School URS, UI Wage records, other)?
No.

Arkansas Department of Higher Education (ADHE) Student Information System

History

1) When was the student unit-record (SUR) system established?
   During the 1992-93 academic year.

2) By whom?
   ADHE.

3) For what purpose (e.g., resource allocation/funding formula, IPEDS, tracking student retention/graduation, tracking students across institutions)?
   All of the examples listed above, as well as institutional coordination (our State Board is a coordinating board), to provide legislatively mandated information to the General Assembly concerning enrollments, SSCH, athletics, state-supported scholarship programs, etc., and other reporting purposes such as Perkins, SREB, and similar activities.

Coverage

1) Which institutions are included?
   All public colleges and universities.

2) Are any independent institutions included? If so, how many or what percentage?
   Just this year we are expanding our data collection efforts to include all 11 (Shorter College is no longer in operation) of the private institutions in our data collection efforts for the primary purpose of monitoring graduation/retention rates of students receiving state scholarships. They will report an enrollment record for each student enrolled during fall semesters (only) and a record for each certificate/degree recipient during the previous academic year. The private institutions have agreed to report historical enrollment data back to and including the fall 1995 semester.

3) Are there any plans for expanding the system's coverage in terms of institutions?
   Private institutions as described above.

4) When are data collected (e.g., Term (quarter, semester, other), Annual, Census only, End of Term, etc.)? Are any other reporting cycles used?
   For <u>public institutions</u>: Each term (summer II, fall, spring and summer I) we collect the following files/records: student, credit course, registration and end-of-term, instructor. These files/records are due at about the mid-point of the term and are "as of" the census data for the institution, eleventh class day for fall/spring semesters and fifth class day for summer terms.
   Annually we collect: Completions, athletes, Perkins, annual instructor file. These are generally due during September or October following the close of the academic year.

   For <u>private institutions</u>: We will collect annual information on students and completions. The collection schedule is the same as for the public institutions.

5) Are there plans to collect the data more frequently?
Not at this time.

Reporting

1) What kinds of statistics and reports are produced regularly by the SUR? Can we get copies of these reports?
Publications with statistics on Enrollments, SSCH and FTE, and Degrees Awarded are regularly published. The table of contents details the types of statistics that are produced. The most recent editions are available via our Web site; paper copies either are available or will be available this summer. We also produce numerous ad hoc statistical reports and studies.
Enrollments: http://www.arkansashighered.com/Enrollment-2001.html
SSCH and FTE: http://www.arkansashighered.com/SSCH-2001.html
Degrees Awarded: http://www.arkansashighered.com/Degrees-2001.html

2) If graduation and retention reporting is done, how is it calculated — 4-year, 5-year, 6-year?
We currently report on the first year through the sixth year. We have the data to report on additional years, and we probably will do so in the next year.

3) If it is a state-level system, how does the state use the data?
The Arkansas Higher Education Coordinating Board, Governor, General Assembly, and other state agencies use the reports.

Data Management Issues

1) Can campuses access the datasets themselves? If so, who has access?
The campuses cannot access the statewide database. Only officials within the Department of Higher Education have access, and that access is quite restricted.

2) Are SSNs used?
Yes.

3) Who has the authority to change data elements and definitions?
Changes are coordinated within the branches of the Department; final authority rests with the Director.

4) How are security and FERPA issues handled?
We do not release student level data. We do participate in selected research projects (doctoral candidates, etc.) on a time available basis when aggregated results are appropriate.

5) Do you cooperate with other (neighboring) states to share data? If so, please explain.
No.

6) Do you link the SUR to other databases (e.g., High School URS, UI Wage records, other)?
Not at this time, but it is currently under review.

California Community Colleges Data Base

History

1) When was the student unit-record (SUR) system established?
It was established in the late 1980's, but full implementation statewide didn't occur until 1990. We generally regard 1992 data as being the first that are useable for research purposes.

2) By whom?
California Community Colleges Chancellor's Office.

3) For what purpose (e.g., resource allocation/funding formula, IPEDS, tracking student retention/graduation, tracking students across institutions)?
All of the above listed are correct, as well as research, program evaluation and statewide accountability.

Coverage

1) Which institutions are included?
The 108 California community colleges.

2) Are any independent institutions included? If so, how many or what percentage?
No.

3) Are there any plans for expanding the system's coverage in terms of institutions?
Only as new California community colleges are created.

4) When are data collected (e.g., Term (quarter, semester, other), Annual, Census only, End of Term, etc.)? Are any other reporting cycles used?
Term — end of term, to be exact. Awards are collected annually. All but two of our colleges are on semesters. We collect data at the end of fall, spring and summer terms.

5) Are there plans to collect the data more frequently?
We have recently converted the collection of financial aid data from annual to term.

Reporting

1) What kinds of statistics and reports are produced regularly by the SUR? Can we get copies of these reports?
Student Demographics, Student Program Awards, Student Services Programs and Program Retention/Success Rates.

2) If graduation and retention reporting is done, how is it calculated — 4-year, 5-year, 6-year?
Six-year.

3) If it is a state-level system, how does the state use the data?
Funding allocation, research, accountability and policy analysis.

Data Management Issues

1) Can campuses access the datasets themselves? If so, who has access?
Yes, we provide the datasets to campuses over the Web. It can be accessed only by local MIS shops.

2) Are SSNs used?
Yes.

3) Who has the authority to change data elements and definitions?
There is a consultative process between the state chancellor's office and the field.

4) How are security and FERPA issues handled?
We use standard security measures for the data warehouses (password access, IP filtering). Regarding FERPA, we negotiate each FERPA issue separately using our legal staff.

5) Do you cooperate with other (neighboring) states to share data? If so, please explain.
No. We use the National Student Clearinghouse for acquisition of transfer data.

6) Do you link the SUR to other databases (e.g., High School URS, UI Wage records, other)?
UI Wage records.

California State University Enrollment Reporting System (ERS)

History

1) When was the student unit record (SUR) system established?
Sometime in the 1970s.

2) By whom?
The California State University (CSU) system, Chancellor's office.

3) For what purpose (e.g., resource allocation/funding formula, IPEDS, tracking student retention/graduation, tracking students across institutions)?
Regular term reports, IPEDS, tracking student retention/graduation, state budget requests and accountability.

Coverage

1) Which institutions are included?
CSU institutions.

2) Are any independent institutions included? If so, how many or what percentage?
No.

3) Are there any plans for expanding the system's coverage in terms of institutions?
CSU, UC, and CCC CEO's have signed a Memorandum of Understanding (MOU) to share data for the purpose of tracking for transfer, retention and graduation. There is also a signed MOU involving CSU, UC, CCC and CPEC to submit, approve and implement research proposals that elucidate how California students make their way through California public higher education institutions; no proposals have been submitted yet.

4) When are data collected (e.g., Term (quarter, semester, other), Annual, Census only, End of Term, etc.)? Are any other reporting cycles used?
Fall profile data are collected to meet the spring IPEDS requirement. At the end of the college year, final summer, fall, winter, and spring term data are collected. Only census data are collected.

5) Are there plans to collect the data more frequently?
No. The system office functions on the principle that data will be requested from the campuses only to support trustee, state and federal mandates. We recently streamlined to the two dates of collection.

Reporting

1) What kinds of statistics and reports are produced regularly by the SUR? Can we get copies of these reports?
Enrollment summaries, application and admission summaries, proficiency summaries, academic

performance reports to California Community Colleges and California high schools; other reports are available at the CSU Web site: www.calstate.edu.

2) If graduation and retention reporting is done, how is it calculated — 4-year, 5-year, 6-year?
CSU is part of CSRDE Consortium and provides data as requested in the consortium. It also reports as is required by IPEDS-GRS. For CSU accountability, we use the JCAR methodology with regard to regularly admitted first-time freshmen and junior California Community College transfers, including the estimate of graduation rates (not just catalog time and 150 percent of catalog time). None of the reports are available on the Web except for IPEDS-GRS, which can be accessed through the peer analysis tool.

3) If it is a state-level system, how does the state use the data?
ERS is a state-level system for the California State University. The data are used to provide information for the CSU trustees, the fiduciary agents of CSU. Information includes analyses, accountability indicators and the like. The data are also used to provide the California Postsecondary Education Commission (CPEC) with a common dataset to develop comparative and statewide postsecondary reports and tables. The data are used by the CSU to provide all IPEDS reports on students and to answer questions raised by state officials in the department of finance, the legislative analyst's office, the governor's office, etc.

Data Management Issues

1) Can campuses access the datasets themselves? If so, who has access?
Campuses can access their own data. They can also develop a MOU signed by campus CEOs, and the CSU will release those campuses' data to institutional research directors.

2) Are SSNs used?
Yes.

3) Who has the authority to change data elements and definitions?
The CSU executive officers, with authority delegated to assistant vice chancellors in consultation with campus counterparts (where feasible).

4) How are security and FERPA issues handled?
Security is handled by the CSU corporate information and technology services. FERPA issues are handled by academic affairs (academic research and student academic support coordinators), with legal advice provided by the office of general counsel.

5) Do you cooperate with other (neighboring) states to share data? If so, please explain.
No.

6) Do you link the SUR to other databases (e.g., High School URS, UI Wage records, other)?
There is no state system of unit records for K-12 as yet. CSU may try to match with UI Wage records at some point and is investigating potential use of a national transfer matching service.

University of California Corporate Student System

History

1) When was the student unit-record (SUR) system established?
1980.

2) By whom?
The UC Office of the President.

3) For what purpose (e.g., resource allocation/funding formula, IPEDS, tracking student retention/graduation, tracking students across institutions)?
Management, analytical and operational reporting.

Coverage

1) Which institutions are included?
All UC campuses.

2) Are any independent institutions included? If so, how many or what percentage?
No.

3) Are there any plans for expanding the system's coverage in terms of institutions?
No.

4) When are data collected (e.g., Term (quarter, semester, other), Annual, Census only, End of Term, etc.)? Are any other reporting cycles used?
Several times each quarter.

5) Are there plans to collect the data more frequently?
No.

Reporting

1) What kinds of statistics and reports are produced regularly by the SUR? Can we get copies of these reports?
Statistical Summary of Students and Staff — annually for fall term, available online at:
http://www.ucop.edu/ucophome/uwnews/stat/
IPEDS reports — limited availability
Information Digest — annually, available online at:
http://www.ucop.edu/sas/infodigest/

2) If graduation and retention reporting is done, how is it calculated — 4-year, 5-year, 6-year?
Four-year, five-year and six-year.

3) If it is a state-level system, how does the state use the data?
The system is used for reporting, policy analysis and planning by the UC Office of the President. Non-confidential data extracts are provided to the State Department of Finance and the California Postsecondary Education Commission (CPEC).

Data Management Issues

1) Can campuses access the datasets themselves? If so, who has access?
No.

2) Are SSNs used?
Yes.

3) Who has the authority to change data elements and definitions?
The UC Office of the President Information and Communication Resources Department issues file specification changes.

4) How are security and FERPA issues handled?
The UC Office of the General Counsel is consulted on FERPA issues. Information security is handled by the UC Office of the President Information and Communication Resources Department.

5) Do you cooperate with other (neighboring) states to share data? If so, please explain.
No.

6) Do you link the SUR to other databases (e.g., High School URS, UI Wage records, other)?
No.

Colorado Student Unit Record Data System (SURDS)

History

1) When was the student unit-record (SUR) system established?
   1987.

2) By whom?
   Colorado Commission on Higher Education (CCHE).

3) For what purpose (e.g., resource allocation/funding formula, IPEDS, tracking student retention/graduation, tracking students across institutions)?
   IPEDS uploads, tracking student retention/graduation and tracking students across institutions.

Coverage

1) Which institutions are included?
   Publics.

2) Are any independent institutions included? If so, how many or what percentage?
   CCHE has received files on a limited basis from several private institutions.

3) Are there any plans for expanding the system's coverage in terms of institutions?
   No.

4) When are data collected (e.g., Term (quarter, semester, other), Annual, Census only, End of Term, etc.)? Are any other reporting cycles used?
   It depends on the file. Enrollment and applicant files are term; degrees and financial aid are annual.

5) Are there plans to collect the data more frequently?
   No.

Reporting

1) What kinds of statistics and reports are produced regularly by the SUR? Can we get copies of these reports?
   At present, the two major routine projects that are heavily dependent on SURDS are the Quality Indicator System (QIS)/Performance Funding project and the Consumer Guide, which now is a module on the ColoradoMentor site. We do numerous smaller projects, but the two mentioned above are good examples. You can link to them at:
   http://www.state.co.us/cche/qi/newprocess.html
   http://www.coloradomentor.org/Consumer_Guide/CG_General/

2) If graduation and retention reporting is done, how is it calculated — 4-year, 5-year, 6-year?
   Please see the QIS report referenced above.

3) If it is a state-level system, how does the state use the data?
To support policy development and monitoring.

Data Management Issues

1) Can campuses access the datasets themselves? If so, who has access?
No.

2) Are SSNs used?
CCHE is heavily dependent on SSNs, but when an SSN isn't available, a campus ID is submitted. Some campuses are converting to institutionally generated student IDs, but CCHE will continue to collect SSNs in most cases in SURDS.

3) Who has the authority to change data elements and definitions?
CCHE staff.

4) How are security and FERPA issues handled?
CCHE doesn't distribute SSN-based data files except when an institution requests a compilation of its own data. In 1998, Colorado's Office of the Attorney General advised that CCHE no longer distribute data files containing SSNs.

5) Do you cooperate with other (neighboring) states to share data? If so, please explain.
No.

6) Do you link the SUR to other databases (e.g., High School URS, UI Wage records, other)?
CCHE has explored some of these options but with limited success due to SSN problems.

Florida Board of Education Division of Colleges & Universities State University System

History

1) When was the student unit-record (SUR) system established?
   Late 1970s.

2) By whom?
   Board of Regents MIS Office.

3) For what purpose (e.g., resource allocation/funding formula, IPEDS, tracking student retention/graduation, tracking students across institutions)?
   All of the above, as well as state reporting.

Coverage

1) Which institutions are included?
   Public four-year colleges and universities.

2) Are any independent institutions included? If so, how many or what percentage?
   No.

3) Are there any plans for expanding the system's coverage in terms of institutions?
   No.

4) When are data collected (e.g., Term (quarter, semester, other), Annual, Census only, End of Term, etc.)? Are any other reporting cycles used?
   Varies by type of info. Please see http://www.fldcu.org/irm/mastfiles/default.asp for frequency.

5) Are there plans to collect the data more frequently?
   No.

Reporting

1) What kinds of statistics and reports are produced regularly by the SUR? Can we get copies of these reports?
   Enrollment and IPEDS reports. Please see enrollment reports at http://www.fldcu.org/enrollrpts/ and Fact Books at http://www.fldcu.org/borpubs/default.asp.

2) If graduation and retention reporting is done, how is it calculated — 4-year, 5-year, 6-year?
   Six-year.

3) If it is a state-level system, how does the state use the data?
Performance funding, accountability measures, Legislative Budget Request, Allocation, Operating Budget, Program Reviews, Student Progression and Retention, Student Fee Formula Update and Articulation with K-12 and Community Colleges.

Data Management Issues

1) Can campuses access the datasets themselves? If so, who has access?
Yes, the Institutional Data Administrator.

2) Are SSNs used?
Yes.

3) Who has the authority to change data elements and definitions?
Changes normally occur when a state statute or rule changes.

4) How are security and FERPA issues handled?
If there is a legitimate requirement for student identifiable data, the office/agency requesting must sign a Buckley Release Form that dictates the use and disposition of student-identifiable data.

5) Do you cooperate with other (neighboring) states to share data? If so, please explain.
No.

6) Do you link the SUR to other databases (e.g., High School URS, UI Wage records, other)?
Yes, K-12 Public School System, Public Community College System and Workforce Records.

Hawaii Student Information Management System (SIMS)

History

1) When was the student unit-record (SUR) system established?
Under development from 1995 to the present, with data beginning in 1997 for selected campuses.

2) By whom?
University of Hawaii system Institutional Research Office.

3) For what purpose (e.g., resource allocation/funding formula, IPEDS, tracking student retention/graduation, tracking students across institutions)?
Planning, policy making and decision support.

Coverage

1) Which institutions are included?
All 10 University of Hawaii institutions, constituting all public higher education for the state.

2) Are any independent institutions included? If so, how many or what percentage?
No.

3) Are there any plans for expanding the system's coverage in terms of institutions?
No.

4) When are data collected (e.g., Term (quarter, semester, other), Annual, Census only, End of Term, etc.)? Are any other reporting cycles used?
Semester basis, at census and end of term.

5) Are there plans to collect the data more frequently?
No, not for SIMS. However, we see a need for data taken at different times for different purposes and will work toward providing, or empowering users to provide for themselves, what they want when they want it.

Reporting

1) What kinds of statistics and reports are produced regularly by SIMS? Can we get copies of these reports?
We are currently working on getting reports directly from SIMS to include demographic and statistical data on students and classes. SIMS is currently the data source, but the report programs used are from another system.

2) If graduation and retention reporting is done, how is it calculated — 4-year, 5-year, 6-year?
Tracking systems at the university's campuses are used to calculate graduation and retention rates. Graduation rate formulas and definitions used follow those in the IPEDS Graduation Rate Survey.

3) If it is a state-level system, how does the state use the data?
The University of Hawaii system uses the data for strategic planning, policy development, tuition preparation, budget preparation, and related planning and policy matters.

Data Management Issues

1) Can campuses access the datasets themselves? If so, who has access?
Faculty and staff may request access for research, planning, and policy development purposes, but currently access is limited.

2) Are SSNs used?
Yes.

3) Who has the authority to change data elements and definitions?
Institutional Research Office.

4) How are security and FERPA issues handled?
Access is currently limited to the system's research staff and a few others at different campus offices.

5) Do you cooperate with other (neighboring) states to share data? If so, please explain.
Not yet.

6) Do you link SIMS to other databases (e.g., High School URS, UI Wage records, other)?
Not yet.

Illinois Share Enrollment and Graduation Files

History

1) When was the student unit-record (SUR) system established?
In 1983.

2) By whom?
IBHE and the public universities and the Illinois Community College Board.

3) For what purpose (e.g., resource allocation/funding formula, IPEDS, tracking student retention/graduation, tracking students across institutions)?
Monitor student progress, retention, transfer and degree completion.

Coverage

1) Which institutions are included?
All public institutions.

2) Are any independent institutions included? If so, how many or what percentage?
Two privates.

3) Are there any plans for expanding the system's coverage in terms of institutions?
Yes. One more private institution was added this past year, with more privates planning to submit data once the Shared Enrollment and Graduation system has been redesigned and upgraded.

4) When are data collected (e.g., Term (quarter, semester, other), Annual, Census only, End of Term, etc.)? Are any other reporting cycles used?
Data are collected once a year and include data from all semesters of the previous fiscal year.

5) Are there plans to collect the data more frequently?
No.

Reporting

1) What kinds of statistics and reports are produced regularly by the SUR? Can we get copies of these reports?
None at this time.

2) If graduation and retention reporting is done, how is it calculated — 4-year, 5-year, 6-year?
(No response.)

3) If it is a state-level system, how does the state use the data?
The data have been used in the past for IBHE's board reports such as persistence and degree

completion and transfers. The data are currently not being used as the system is in the process of redesign.

Data Management Issues

1) Can campuses access the datasets themselves? If so, who has access?
Campuses receive a file annually that includes data for all students who have ever reported attending their institution. They are able to see where their students have gone after leaving their institution or where their students transferred from. They do not have access to the data otherwise. The only ones who currently have access to the complete dataset are IS staff at BHE and the system managers at Southern Illinois University — Carbondale.

2) Are SSNs used?
Yes.

3) Who has the authority to change data elements and definitions?
The Research Advisory Committee that is composed of members from the participating institutions, the Illinois Community College Board and IBHE.

4) How are security and FERPA issues handled?
We limit access to the data, and we only report summary data. If there is a headcount of fewer than six, no data are reported, even in summary form.

5) Do you cooperate with other (neighboring) states to share data? If so, please explain.
Not at this time.

6) Do you link the SUR to other databases (e.g., High School URS, UI Wage records, other)?
Not at this time.

Indiana Student Information System

History

1) When was the student unit-record (SUR) system established?
In 1978.

2) By whom?
The Indiana General Assembly established the Commission for Higher Education in 1971, but the Student Information System (SIS), as a unit record database, begins with Fiscal Year 1978-79.

3) For what purpose (e.g., resource allocation/funding formula, IPEDS, tracking student retention/graduation, tracking students across institutions)?
The Student Information System was established in order to carry out the directive of the Indiana General Assembly as put forth in IC 20-12-0.5-8(6): "To make, or cause to be made, studies of the needs for various types of postsecondary education and to make recommendations to the general assembly and the governor concerning the organization of these programs. The commission shall make or cause to be made studies of the needs for various types of postsecondary vocational education and shall submit to the commission on vocational and technical education within the department of workforce development its findings in this regard."

Coverage

1) Which institutions are included?
Public and private (non-for-profit) institutions.

2) Are any independent institutions included? If so, how many or what percentage?
Twenty-nine of 31 member colleges of the Independent Colleges of Indiana (ICI) currently provide SIS data to the Commission for Higher Education through ICI.

3) Are there any plans for expanding the system's coverage in terms of institutions?
The goal is to have full participation from the ICI member colleges.

4) When are data collected (e.g., Term (quarter, semester, other), Annual, Census only, End of Term, etc.)? Are any other reporting cycles used?
Data are collected annually (in the fall following the fiscal year being reported).

5) Are there plans to collect the data more frequently?
Not currently.

Reporting

1) What kinds of statistics and reports are produced regularly by the SUR? Can we get copies of these reports?
   Degree completion and persistence
   Factbook information on enrollment and degrees awarded

2) If graduation and retention reporting is done, how is it calculated — 4-year, 5-year, 6-year?
   The principal numbers are presented based on a six-year completion time frame; however, shorter-duration rates are generally available in the reports.

3) If it is a state-level system, how does the state use the data?
   Planning, funding recommendation, degree program review and approval, as well as "other duties as assigned" by the Governor and the General Assembly.

Data Management Issues

1) Can campuses access the datasets themselves? If so, who has access?
   No.

2) Are SSNs used?
   Yes.

3) Who has the authority to change data elements and definitions?
   The Commission for Higher Education.

4) How are security and FERPA issues handled?
   Generally, we do not have problems relating to FERPA, since all reporting is in aggregate form. Small cell sizes (which may provide students' identities or statistical anomalies) in reports and analyses may be blanked in the reports.
   Occasionally, the Commission enters into cooperative research agreements with outside parties. In such cases, a data usage agreement is initiated.

5) Do you cooperate with other (neighboring) states to share data? If so, please explain.
   No.

6) Do you link the SUR to other databases (e.g., High School URS, UI Wage records, other)?
   One cooperative data arrangement we have is with the Indiana Department of Workforce Development. Its analyses on vocational and technical students include data linkages with High School records, UI wage records and military enlistment records.

Kentucky Comprehensive Data Base

History

1) When was the student unit-record (SUR) system established?
1980.

2) By whom?
Kentucky Legislature, KRS 164.020, 164.095 and KRS 61.870-61.884.

3) For what purpose (e.g., resource allocation/funding formula, IPEDS, tracking student retention/graduation, tracking students across institutions)?
To determine participation rates, track student enrollments, track campus compliance with equal educational opportunity goals, determine space needs.

Coverage

1) Which institutions are included?
All public colleges and universities, including community and technical colleges of the Kentucky Community and Technical College System (KCTCS).

2) Are any independent institutions included? If so, how many or what percentage?
All of the private institutions that constitute the Association of Independent Kentucky Colleges and Universities (AIKCU) report data. An additional independent institution that is not a member of AIKCU, but is licensed by the council, also provides data.
Independent institutions provide similar enrollment files (fall semester only), freshmen student performance files and degrees awarded files. Independents do not provide financial or physical facilities reports.

3) Are there any plans for expanding the system's coverage in terms of institutions?
No current plans for expanding exist.

4) When are data collected (e.g., Term (quarter, semester, other), Annual, Census only, End of Term, etc.)? Are any other reporting cycles used?
Academic program changes are submitted to the Degree Program Inventory as they are approved by the campus. There is no regular reporting cycle for these data.

5) Are there plans to collect the data more frequently?
No current plans for more frequent data collection exist.

Reporting

1) What kinds of statistics and reports are produced regularly by the SUR? Can we get copies of these reports?
Regular reports are no longer generated. Selected tables are made available on the Web site of the Kentucky Council of Postsecondary Education, under Facts & Figures: www.cpe.state.ky.us.

2) If graduation and retention reporting is done, how is it calculated — 4-year, 5-year, 6-year?
Retention Definition for Universities: The retention cohort includes all fall first-time, degree-seeking freshmen (associate, baccalaureate, undecided, full-time, part-time). First-time freshmen who enroll in the summer and enroll again in the fall and first-time students who earned college credit before graduation from high school are also included. Students enrolled at their native institution, at any other Kentucky state-supported or independent institution, or students who graduated by the following fall semester are considered retained.

Retention Definition for Two-year Community and Technical Colleges: The retention cohort includes all fall first-time, associate degree-, diploma- or certificate-seeking freshmen (undecided, full-time, part-time). First-time freshmen who enroll in the summer and enroll again in the fall and first-time students who earned college credit before graduation from high school are also included. Students enrolled at their native institution, at any other Kentucky state-supported or independent institution, or students who graduated by the following fall semester are considered retained.
Graduation definition: (Changes are expected to the definition in August that will bring it in line with the IPEDS GRS definition)

Six-Year Graduation Rate — Bachelor's Students:
Cohort: Fall first-time freshmen (baccalaureate, undecided, full-time). First-time freshmen, who enrolled in the summer and as full-time students at the same institution in the following fall semester, and first-time sophomores, who earned college credit before graduation from high school, will also be included.
Calculation: The percentage who earn a bachelor's degree at the same institution within six years — by the fall semester six years later.

Five-Year Graduation Rate — Transfer Students:
Cohort: All first-time transfer students (baccalaureate, full-time) with 30 or more credit hours in the fall semester.
Calculation: The percentage who earn a bachelor's degree at the same institution within five years — by the fall semester five years later.

Three-Year Average:
(Sum of graduated in Cohorts 1, 2, and 3)/(Sum of Cohorts 1, 2, and 3).

3) If it is a state-level system, how does the state use the data?
Requests are received from the State Budget Office and from the Legislative Research Commission to address various higher education issues related to state finance and policy.

Kentucky (continued)

Data Management Issues

1) Can campuses access the datasets themselves? If so, who has access?
No, datasets are not available to campuses.

2) Are SSNs used?
Yes

3) Who has the authority to change data elements and definitions?
Once each year the Kentucky Council of Postsecondary Education (KCPE) proposes changes to the Statewide Comprehensive Data Base Committee. This committee is composed of institutional researchers from the public universities and KCTCS administration. Proposed changes are often revised based on the feedback from the committee. The council may still implement proposed changes even if there is not unanimous support from the committee.

4) How are security and FERPA issues handled?
Access to personally identifiable student information is restricted within the agency to programmers or to those program individuals with a need to know. Personally identifiable information is isolated on secure servers; any outside individuals with access to personally identifiable information are required to sign non-disclosure agreements. KCPE and the KYVU/KYVL have undergone a security audit and made changes in passwords and in the set-up of the servers to make them more secure.

5) Do you cooperate with other (neighboring) states to share data? If so, please explain.
Currently KCPE does not share data on a regular basis but would develop a written agreement to exchange data if a neighboring state requested the data.

6) Do you link the SUR to other databases (e.g., High School URS, UI Wage records, other)?
Currently there are no systematic linkages for sharing. However, individual datasets have been provided from the Drivers License Bureau and the Department of Employment Services. KCPE is working with the Kentucky Department of Education, the Education Professional Standards Board and the Kentucky Higher Education Assistance Authority to establish formal linkages to routinely share data.

Maryland Enrollment Information System and Degree Information System

History

1) When was the student unit-record (SUR) system established?
1977.

2) By whom?
Maryland Higher Education Commission (MHEC).

3) For what purpose (e.g., resource allocation/funding formula, IPEDS, tracking student retention/graduation, tracking students across institutions)?
IPEDS, tracking student retention/graduation, tracking students across institutions, enrollment projections and program review.

Coverage

1) Which institutions are included?
Public colleges and universities.

2) Are any independent institutions included? If so, how many or what percentage?
None at this time.

3) Are there any plans for expanding the system's coverage in terms of institutions?
Expansion to independents are being discussed at this time.

4) When are data collected (e.g., Term (quarter, semester, other), Annual, Census only, End of Term, etc.)? Are any other reporting cycles used?
EIS — census fall semester; DIS — annual.

5) Are there plans to collect the data more frequently?
Not at this time.

Reporting

1) What kinds of statistics and reports are produced regularly by the SUR? Can we get copies of these reports?
Enrollment, graduation/retention, and transfer reports can be obtained by contacting the Research and Policy Analysis Division.

2) If graduation and retention reporting is done, how is it calculated — 4-year, 5-year, 6-year?
Both are done for any period from one to seven years.

3) If it is a state-level system, how does the state use the data?
Research, policy analysis, and planning.

Maryland (continued)

Data Management Issues

1) Can campuses access the datasets themselves? If so, who has access?
No.

2) Are SSNs used?
Yes, but encrypted.

3) Who has the authority to change data elements and definitions?
MHEC.

4) How are security and FERPA issues handled?
Commission policy on release of FERPA data includes both legal and statewide review.

5) Do you cooperate with other (neighboring) states to share data? If so, please explain.
No.

6) Do you link the SUR to other databases (e.g., High School URS, UI Wage records, other)?
Yes, for special defined projects only and then in a limited focus for project.

Massachusetts Higher Education Information Resource System (HEIRS)

History

1) When was the student unit-record (SUR) system established?
1985.

2) By whom?
Massachusetts Board of Higher Education.

3) For what purpose (e.g., resource allocation/funding formula, IPEDS, tracking student retention/graduation, tracking students across institutions)?
System research and planning.

Coverage

1) Which institutions are included?
Public colleges and universities.

2) Are any independent institutions included? If so, how many or what percentage?
No.

3) Are there any plans for expanding the system's coverage in terms of institutions?
No.

4) When are data collected (e.g., Term (quarter, semester, other), Annual, Census only, End of Term, etc.)? Are any other reporting cycles used?
Data are collected every spring for the previous fall semester, based on a mid-October census date.

5) Are there plans to collect the data more frequently?
Yes. Ultimately the goal is for a year-round reporting cycle with spring enrollment data also included in the database.

Reporting

1) What kinds of statistics and reports are produced regularly by the SUR? Can we get copies of these reports?
Facts and Stats: Headcount/FTE enrollment, Degrees Conferred; Student Ethnicity; Age Distribution — yearly.
Enrollment and Admissions Summary Report — yearly.
College-to-School Report — yearly.
Condition for Higher Education — yearly.
Performance Indicators Linear Trends — yearly.
Most of these reports are available on our Web page: http://www.mass.edu/.

Massachusetts (continued)

2) If graduation and retention reporting is done, how is it calculated—4-year, 5-year, 6-year?
Six-year completion rate is a performance indicator measured at four-year levels.

3) If it is a state-level system, how does the state use the data?
HEIRS data are included in various reports produced by the Board of Higher Education for the legislature and governor, and used most often for budget deliberations and institutional performance accountability.

Data Management Issues

1) Can campuses access the datasets themselves? If so, who has access?
Each institution has an HEIRS coordinator who can access his/her institution's data. We are in the process of evolving the system to a true data warehouse so that institutions will have access to aggregated data.

2) Are SSNs used?
Yes.

3) Who has the authority to change data elements and definitions?
The Associate Vice Chancellor for Planning, Research and Assessment.

4) How are security and FERPA issues handled?
Security is a top priority. The database is protected with a firewall and other measures. Because of FERPA and other privacy concerns, only aggregate totals are released in reports.

5) Do you cooperate with other (neighboring) states to share data? If so, please explain.
No.

6) Do you link the SUR to other databases (e.g., High School URS, UI Wage records, other)?
Link to UI Wage Records maintained by the Department of Employment and Training through a Placement Accountability System.

Minnesota Student Data Bases

History

1) When was the student unit-record (SUR) system established?
1983.

2) By whom?
Minnesota Legislature.

3) For what purpose (e.g., resource allocation/funding formula, IPEDS, tracking student retention/graduation, tracking students across institutions)?
Enrollment and degree databases facilitate: analyzing current and future higher education needs, comparing enrollment or graduation patterns among Minnesota institutions and others, describing student characteristics, producing degree awards, and allocating campus-based financial aid.

Coverage

1) Which institutions are included?
All public colleges and universities.

2) Are any independent institutions included? If so, how many or what percentage?
Nearly all privates are included — liberal arts and private two-year career schools. We ask institutions whose students are eligible for state financial aid programs to participate.

3) Are there any plans for expanding the system's coverage in terms of institutions?
No, it's not necessary.

4) When are data collected (e.g., Term (quarter, semester, other), Annual, Census only, End of Term, etc.)? Are any other reporting cycles used?
Term and annual for some institutions.

5) Are there plans to collect the data more frequently?
The system is set up to collect data for every term, but that has not been implemented.

Reporting

1) What kinds of statistics and reports are produced regularly by the SUR? Can we get copies of these reports?
Most of the standard statistics are available on our Web site (www.mnscu.edu), as well as the reports. Standard reports include enrollment and degrees awarded.

2) If graduation and retention reporting is done, how is it calculated — 4-year, 5-year, 6-year?
We do not independently calculate these rates. We use the data provided on the IPEDS GRS survey.

Minnesota (continued)

3) If it is a state-level system, how does the state use the data?
Financial aid allocation, standard enrollment data and calculation of participation rates.

Data Management Issues

1) Can campuses access the datasets themselves? If so, who has access?
Anyone can access the data on the Web site using the enrollment search function.

2) Are SSNs used?
Yes.

3) Who has the authority to change data elements and definitions?
Our agency consults with representatives of the postsecondary institutions. This was last done in 1994, but we anticipate another change in 2004 when new racial-ethnic codes will be reported for IPEDS.

4) How are security and FERPA issues handled?
We follow federal and state guidelines — generally, only summary data are released for studies to improve access and instruction.

5) Do you cooperate with other (neighboring) states to share data? If so, please explain.
No.

6) Do you link the SUR to other databases (e.g., High School URS, UI Wage records, other)?
Not on a regular basis. We only did this recently with data collected from a sample of recent high school graduates. The high school students completed a survey in which they gave consent for their data to be matched with our data. Minnesota's data-privacy practices are quite restrictive.

Missouri Student Unit Record Data Base

History

1) When was the student unit-record (SUR) system established?
The first academic year we started collecting unit-record data was 1987-1988.

2) By whom?
The Missouri Coordinating Board for Higher Education.

3) For what purpose (e.g., resource allocation/funding formula, IPEDS, tracking student retention/graduation, tracking students across institutions)?
For a variety of purposes, including the above.

Coverage

1) Which institutions are included?
All Missouri public two- and four-year institutions.

2) Are any independent institutions included? If so, how many or what percentage?
No.

3) Are there any plans for expanding the system's coverage in terms of institutions?
There are discussions but no action plans.

4) When are data collected (e.g., Term (quarter, semester, other), Annual, Census only, End of Term, etc.)? Are any other reporting cycles used?
Data are collected annually from institutions during the period from September to November.

5) Are there plans to collect the data more frequently?
No.

Reporting

1) What kinds of statistics and reports are produced regularly by the SUR? Can we get copies of these reports?
Quite a few. Two major ones are the Missouri Higher Education Progress Report and the Missouri High School Graduates' College Performance Report. Copies are available upon request.

2) If graduation and retention reporting is done, how is it calculated — 4-year, 5-year, 6-year?
Three-year for community colleges and six-year for four-year institutions.

3) If it is a state-level system, how does the state use the data?
Performance-based funding; institutional mission review; ad hoc research.

Missouri (continued)

Data Management Issues

1) Can campuses access the datasets themselves? If so, who has access?
   For cross-institutional data, they do not have direct access.

2) Are SSNs used?
   Yes.

3) Who has the authority to change data elements and definitions?
   The Board in consultations with the State Data Advisory Committee, which consists of representatives from selected institutions.

4) How are security and FERPA issues handled?
   Only aggregate data are distributed.

5) Do you cooperate with other (neighboring) states to share data? If so, please explain.
   Not student-level data involving SSNs. FERPA does not allow that.

6) Do you link the SUR to other databases (e.g., High School URS, UI Wage records, other)?
   Yes.

New Jersey Student Unit Record Enrollment (SURE) System

History

1) When was SURE established?
1985.

2) By whom?
New Jersey Department of Higher Education (The predecessor agency to the New Jersey Commission on Higher Education).

3) For what purpose (e.g., resource allocation/funding formula, IPEDS, tracking student retention/graduation, tracking students across institutions)?
IPEDS reporting, tracking retention, attrition, etc.

Coverage

1) Which institutions are included?
All public colleges and universities and six privates.

2) Are any independent institutions included? If so, how many or what percentage?
Six private.

3) Are there any plans for expanding the system's coverage in terms of institutions?
No definite plans; however, we encourage non-participating institutions to join.

4) When are data collected (e.g., Term (quarter, semester, other), Annual, Census only, End of Term, etc.)? Are any other reporting cycles used?
Term.

5) Are there plans to collect the data more frequently?
No.

Reporting

1) What kinds of statistics and reports are produced regularly by SURE? Can we get copies of these reports?
Systemwide Accountability Report, Institutional Accountability Report, Policy Briefs and Performance Funding. The Systemwide Accountability Report is published annually and available for distribution. The other reports are for internal or institutional use and are not formally published.

2) If graduation and retention reporting is done, how is it calculated — 4-year, 5-year, 6-year?
The standard graduation rates are: Three years for the two-year colleges and six years for the four-year colleges. However, other duration graduation rates are periodically calculated and used. The retention rates are calculated for the third semester.

New Jersey (continued)

3) If it is a state-level system, how does the state use the data?
Accountability and performance-based funding.

Data Management Issues

1) Can campuses access the datasets themselves? If so, who has access?
Yes, upon request, longitudinal files of their own students or systemwide "participant use files" are transmitted to the institutions.

2) Are SSNs used?
Yes.

3) Who has the authority to change data elements and definitions?
New Jersey Commission on Higher Education.

4) How are security and FERPA issues handled?
SSNs are stripped from the files.

5) Do you cooperate with other (neighboring) states to share data? If so, please explain.
No.

6) Do you link the SURE to other databases (e.g., High School URS, UI Wage records, other)?
HESAA databases like TAG/EOF. What other Commission databases are data linked with? The SURE data are also fed into the New Jersey Department of Labor's WIA (workforce) database.

New Mexico Data Editing and Reporting System (DEARS)

History

1) When was the student unit-record (SUR) system established?
New Mexico Commission of Higher Education (NMCHE) assumed responsibility in 1994.

2) By whom?
NMCHE.

3) For what purpose (e.g., resource allocation/funding formula, IPEDS, tracking student retention/graduation, tracking students across institutions)?
Funding Formula.

Coverage

1) Which institutions are included?
All public postsecondary and limited private institutions.

2) Are any independent institutions included? If so, how many or what percentage?
All using federal funds, but not for the "student data file."

3) Are there any plans for expanding the system's coverage in terms of institutions?
No.

4) When are data collected (e.g., Term (quarter, semester, other), Annual, Census only, End of Term, etc.)? Are any other reporting cycles used?
All of the above. Student and course by census date and end-of-term for every semester, annual grads, financial aid.

5) Are there plans to collect the data more frequently?
No.

Reporting

1) What kinds of statistics and reports are produced regularly by the SUR? Can we get copies of these reports?
Dozens of reports — graduation rates, enrollment, etc.

2) If graduation and retention reporting is done, how is it calculated — 4-year, 5-year, 6-year?
Three-year, six-year, ten-year

3) If it is a state-level system, how does the state use the data?
Many different ways — student success, economic impact of education, etc.

New Mexico (continued)

Data Management Issues

1) Can campuses access the datasets themselves? If so, who has access?
We provide customized extracts to the institutions at present and are moving toward institutional access.

2) Are SSNs used?
Yes.

3) Who has the authority to change data elements and definitions?
NMCHE, with advisory input from institutions.

4) How are security and FERPA issues handled?
We have detailed data-sharing agreements. We support the concept of individual privacy and the letter and spirit of the FERPA rules. However, FERPA was never intended to prevent research that would improve higher education systems. Specific research exceptions are included in the body of the legislation and are observed by NMCHE, as well as every precaution in safeguarding the privacy of individuals. Detailed data-sharing agreements are in place for specific projects; these agreements outline acceptable uses and safeguards for data.

5) Do you cooperate with other (neighboring) states to share data? If so, please explain.
Not at this time.

6) Do you link the SUR to other databases (e.g., High School URS, UI Wage records, other)?
Limited to UI at this time; possibility of linking to State of New Mexico Department of Education in the future.

City University of New York

History

1) When was the student unit-record (SUR) system established?
The original proposal for the project was written in May 1990. Development began in April 1999, but it was not until January 2002 that the database really started being used.

2) By whom?
The Dean of the Office of Institutional Research.

3) For what purpose (e.g., resource allocation/funding formula, IPEDS, tracking student retention/graduation, tracking students across institutions)?
While the general purpose of the database has always been to develop a system that would facilitate the tracking of students both prospectively and retrospectively across campuses within the university, the narrow focus of the project over the past three years has been to enhance the ability of the campuses to identify special populations as defined by VTEA reporting requirements.

Coverage

1) Which institutions are included?
Public colleges and universities in NYC.

2) Are any independent institutions included? If so, how many or what percentage?
No.

3) Are there any plans for expanding the system's coverage in terms of institutions?
Using National Student Clearinghouse data to determine which students transfer to institutions outside the university system.

4) When are data collected (e.g., Term (quarter, semester, other), Annual, Census only, End of Term, etc.)? Are any other reporting cycles used?
Term.

5) Are there plans to collect the data more frequently?
No.

Reporting

1) What kinds of statistics and reports are produced regularly by the SUR? Can we get copies of these reports?
VTEA-1 Part I (First-time, Full-time Freshmen in Vocational Programs), VTEA-1 Part II (Graduates in Vocational Programs), VTEA Institutional Profile, VTEA Progress Report in Major Efforts, IPEDS-GRS (Graduation Rate Survey), retention and graduation rate indicators for the Executive Compensation

Plan, and sundry admission, enrollment and graduation tables that can be generated through a Web interface.

2) If graduation and retention reporting is done, how is it calculated — 4-year, 5-year, 6-year?
For the Executive Compensation Plan, one-year retention rates and six-year graduation rates are used for both associate and bachelor-level programs. For IPEDS, three-year graduation rates are used for associate-level programs, and six-year graduation rates are used for bachelor-level programs. However, the database is designed to compute graduation rates through ten years.

3) If it is a state-level system, how does the state use the data?
(No response.)

Data Management Issues

1) Can campuses access the datasets themselves? If so, who has access?
Currently only the campus Institutional Research directors have access to the database.

2) Are SSNs used?
Yes.

3) Who has the authority to change data elements and definitions?
Central Office of Institutional Research.

4) How are security and FERPA issues handled?
Access to data for authorized users is controlled by the database administrator. Campus-based administrators are only allowed access to unit-record data for their own students. Network security is the responsibility of Computer Information Services. Web-accessible reports are generated from tables with aggregate-level data.

5) Do you cooperate with other (neighboring) states to share data? If so, please explain.
No.

6) Do you link the SUR to other databases (e.g., High School URS, UI Wage records, other)?
No. However, data can easily be extracted from the database by authorized users and combined with data from other systems.

State University of New York Student Data File (SDF)

History

1) When was the student unit-record (SUR) system established?
The SUNY SDF was initiated by the System Office of Institutional Research in 1978, but not all campuses were on the file initially. In fact, the last four campuses (the Cornell Statutory colleges) became active for the first time this year. Within five years (Fall 1983), we had approximately 50 percent participation and roughly 90 percent participation within 10 years (Fall 1988). The last six or seven campuses were difficult to get on board, but we finally got 100 percent (all 64 institutions) in Fall 2001. The SUNY Statutory Colleges (Cornell Statutory, Ceramics at Alfred) are not considered private institutions, although they are closely affiliated with privates (Cornell Endowed and Alfred University).

2) By whom?
System Office of Institutional Research.

3) For what purpose (e.g., resource allocation/funding formula, IPEDS, tracking student retention/graduation, tracking students across institutions)?
The purpose of the file includes all of those mentioned above. Enrollment planning, academic planning, budget/resource allocation, internal reporting and analysis, external reporting (IPEDS and NYS Education Department), student tracking — both attrition/retention/grad rate, as well as tracking transfer students across the system or using National Student Clearinghouse data into non-SUNY institutions.

Coverage

1) Which institutions are included?
SUNY

2) Are any independent institutions included? If so, how many or what percentage?
No.

3) Are there any plans for expanding the system's coverage in terms of institutions?
(No response.)

4) When are data collected (e.g., Term (quarter, semester, other), Annual, Census only, End of Term, etc.)? Are any other reporting cycles used?
The SDF collects enrollment data by term (fall, spring, summer, inter-session), and enrollment is reported as of the census date (end of the third week). There has been some very preliminary discussion of moving to an alternative reporting cycle (monthly possibly).

4) Are there plans to collect the data more frequently?
(No response.)

New York (continued)

Reporting

1) What kinds of statistics and reports are produced regularly by the SUR? Can we get copies of these reports?
We generate thousands of reports every year, and I'm not sure how many of those come directly or indirectly from the SDF. We do a lot with retention/graduation rate reporting, with much of it ad hoc, but our standard reporting would include up through a six-year rate for four-year institutions and a four-year rate for two-year institutions.

2) If graduation and retention reporting is done, how is it calculated—4-year, 5-year, 6-year?
(No response.)

3) If it is a state-level system, how does the state use the data?
NYSED has a routine data-collection effort that encompasses the IPEDS data, in addition to some data that are unique to their needs. Everything they get from us and the private sector is aggregate data, not individual student records (although they are talking about possibly moving in that direction). In turn NYSED prepares summaries of what they collect and makes it available to us and other interested parties.

Data Management Issues

1) Can campuses access the datasets themselves? If so, who has access?
The System IR Office controls the data and data elements. We are currently putting the data into a data warehouse, which we will share with the colleges.

2) Are SSNs used?
We ask for SSN, and most, but not all, campuses provide it.

3) Who has the authority to change data elements and definitions?
The System IR Office determines what gets collected, when, how and defines the data.

4) How are security and FERPA issues handled?
When we distribute individual student data internally (other than file editing/maintenance transactions), we require signed FERPA letters. We do not release individual student data to any external agent without a subpoena.

5) Do you cooperate with other (neighboring) states to share data? If so, please explain.
Although we have shared data with other states, we do not do so routinely. If we get requests from other state systems, we try to respond. If we need something, we call and sometimes get a response.

6) Do you link the SUR to other databases (e.g., High School URS, UI Wage records, other)?
We send the SDF to National Student Clearinghouse data. We are also having discussions with NY Department of Labor to get wage data but have yet to do so in any meaningful way. We have had discussions internally (to SUNY) about getting high school data, and we have had brief discussions with NYSED about it, but we have not yet obtained access to K-12 data.

North Carolina Community College System Curriculum Registration Data

History

1) When was the student unit-record (SUR) system established?
In 1980. Prior to that, community colleges were part of the K-12 system and were under that system's data-gathering process.

2) By whom?
The General Assembly.

3) For what purpose (e.g., resource allocation/funding formula, IPEDS, tracking student retention/graduation, tracking students across institutions)?
Funding, central record keeping for the system.

Coverage

1) Which institutions are included?
NC Community Colleges (58 colleges).

2) Are any independent institutions included? If so, how many or what percentage?
No.

3) Are there any plans for expanding the system's coverage in terms of institutions?
No.

4) When are data collected (e.g., Term (quarter, semester, other), Annual, Census only, End of Term, etc.)? Are any other reporting cycles used?
End of each semester.

5) Are there plans to collect the data more frequently?
No.

Reporting

1) What kinds of statistics and reports are produced regularly by the SUR? Can we get copies of these reports?
Enrollment statistics in semester and annual reports; System Fact Book
IPEDS; Legislative Reports.
All are available on our Web site: (www.ncccs.cc.nc.us).

2) If graduation and retention reporting is done, how is it calculated — 4-year, 5-year, 6-year?
Not done except for IPEDS; colleges do that reporting.

3) If it is a state-level system, how does the state use the data?
Accountability, funding, policy-making, program improvement.

Data Management Issues

1) Can campuses access the datasets themselves? If so, who has access?
Yes, but this is recent due to the implementation of our system data warehouse. Colleges can obtain aggregate data systemwide and unit record data on their own students. Access is granted by the System Office after an individual has gone through training and signed the appropriate "usage" documents.

2) Are SSNs used?
Yes.

3) Who has the authority to change data elements and definitions?
Colleges can change data; data elements are defined at System level.

4) How are security and FERPA issues handled?
Limit access to unit record data in accordance with FERPA conventions.

5) Do you cooperate with other (neighboring) states to share data? If so, please explain.
No, but we do share data with the University System.

6) Do you link the SUR to other databases (e.g., High School URS, UI Wage records, other)?
Yes--UNC System data and UI Wage records.

UNC Student Data File

History

1) When was the student unit-record (SUR) system established?
In 1980.

2) By whom?
UNC General Administration.

3) For what purpose (e.g., resource allocation/funding formula, IPEDS, tracking student retention/graduation, tracking students across institutions)??
All of the above.

Coverage

1) Which institutions are included?
All 16 UNC institutions.

2) Are any independent institutions included? If so, how many or what percentage?
About five of 37.

3) Are there any plans for expanding the system's coverage in terms of institutions?
Discussion about asking more private colleges to join has occurred on occasion, but there are no plans to force the issue.

4) When are data collected (e.g., Term (quarter, semester, other), Annual, Census only, End of Term, etc.)? Are any other reporting cycles used?
Fall and spring for on-campus enrollments, once annually for student financial aid files, end of term for distance education enrollment files and student credit hour, grade and course description files.
Term.

5) Are there plans to collect the data more frequently?
None that I know about.

Reporting

1) What kinds of statistics and reports are produced regularly by the SUR? Can we get copies of these reports?
Yes, examples of reports are available. The number of reports is voluminous.

2) If graduation and retention reporting is done, how is it calculated — 4-year, 5-year, 6-year?
All years of follow-up from three to 10, including "within system" and "within institution" tracking. Rates calculated include retention, graduation and persistence for all first-time full-time freshmen. All rates can be calculated for key subgroups (e.g., race, ethnicity, gender, age, residence status, etc.

3) If it is a state-level system, how does the state use the data?
Budgeting, enrollment reporting, planning, accountability and ad hoc reporting as needed.

Data Management Issues

1) Can campuses access the datasets themselves? If so, who has access?
DIRs have access to their own data with SSNs, but only to other campus data without SSNs.

2) Are SSNs used?
Yes.

3) Who has the authority to change data elements and definitions?
Campus directors of institutional research and IR staff in the UNC Office of the President.

4) How are security and FERPA issues handled?
We have third parties sign agreements for using data consistent with FERPA guidelines, and we typically strip away SSNs. Lawyers typically refer special data-sharing agreements.

5) Do you cooperate with other (neighboring) states to share data? If so, please explain.
No, not on a regular basis.

6) Do you link the SUR to other databases (e.g., High School URS, UI Wage records, other)?
Yes, UI in North Carolina.

Ohio Higher Education Information (HEI) System

History

1) When was the student unit-record (SUR) system established?
HEI went live in the winter of 1998.

2) By whom?
It was a collective effort of Ohio's state colleges and universities and the Ohio Board of Regents (OBR).

3) For what purpose (e.g., resource allocation/funding formula, IPEDS, tracking student retention/graduation, tracking students across institutions)?
(In order of initial importance): Resource allocation; student tracking across campuses; student retention/graduation; IPEDS facilitation; general performance reporting.

Coverage

1) Which institutions are included?
Originally, public colleges and universities.

2) Are any independent institutions included? If so, how many or what percentage?
Private colleges and universities do submit financial aid information to HEI, and starting with FY 01 began to submit demographic and completion information about students who receive state-sponsored financial aid.

3) Are there any plans for expanding the system's coverage in terms of institutions?
See above.

4) When are data collected (e.g., Term (quarter, semester, other), Annual, Census only, End of Term, etc.)? Are any other reporting cycles used?
Term and annual, depending upon the data.

5) Are there plans to collect the data more frequently?
No.

Reporting

1) What kinds of statistics and reports are produced regularly by the SUR? Can we get copies of these reports?
HEI data are used for a multiplicity of purposes, including the determination of state share of instruction, comparative reports, facilitation of IPEDS reporting and performance reporting. You can see examples of the types of reports generated from these data by accessing the following Board of Regents' Web pages:

General data reports:
http://www.regents.state.oh.us/mainpages/dataseries.html

Annual performance report:
http://www.regents.state.oh.us/perfrpt/student_outcomes.html
Subsidy information:
http://www.regents.state.oh.us/financial/budget_financial.html

2) If graduation and retention reporting is done, how is it calculated — 4-year, 5-year, 6-year?
There is no state standard, and HEI can measure all three rates. Most important, because it is a statewide SSN-based system, HEI can measure systemwide graduation and retention rates. Unlike most other states, Ohio can include in its graduation and retention measures the outcomes for students who transfer (in Ohio) from their campus of original enrollment. The exclusion of transfer students leads to a significant underestimation of statewide graduation and retention rates.

3) If it is a state-level system, how does the state use the data?
Resource allocation; student tracking across campuses; student retention/graduation; IPEDS facilitation; general performance reporting.

Data Management Issues

1) Can campuses access the datasets themselves? If so, who has access?
Yes. Authorized data reporters can access data for their campus that they have submitted. Additionally, campus authorized personnel can access wage information about their students and graduates, but only for legitimate research purposes.

2) Are SSNs used?
Yes, but the HEI system masks SSNs through a procedure that creates a unique 'OBR ID' for each student.

3) Who has the authority to change data elements and definitions?
HEI staff, in consultation with campus and other representatives.

4) How are security and FERPA issues handled?
Data access policies can be seen at http://www.regents.state.oh.us/hei/Policy.PDF. Potentially sensitive data are accessed only via password-protected accounts administered by campus contacts. Data users are trained about the sensitivity of data and are advised about the proper use of the data and the consequences for misuse of the data. Campus data reporters and others given access to sensitive data sign forms acknowledging that they are aware of the sensitivity of the data and promise due diligence in assuring that the data will not be compromised. Reports published using HEI data are stripped of personally identifiable information.

5) Do you cooperate with other (neighboring) states to share data? If so, please explain.
No, but we would like to do so.

6) Do you link the SUR to other databases (e.g., High School URS, UI Wage records, other)?
Yes — State wage and salary datasets, financial aid, ACT and College Board data, with plans in place to link to the state's K-12 system, once that system finalizes its plans for creating unique student IDs that are not SSNs.

Oklahoma Student Data System

History

1) When was the student unit-record (SUR) system established?
1977.

2) By whom?
Oklahoma State Regents for Higher Education.

3) For what purpose (e.g., resource allocation/funding formula, IPEDS, tracking student retention/graduation, tracking students across institutions)?
Resource allocation, academic program productivity and tracking students.

Coverage

1) Which institutions are included?
All public and private higher education institutions.

2) Are any independent institutions included? If so, how many or what percentage?
One hundred percent.

3) Are there any plans for expanding the system's coverage in terms of institutions?
No.

4) When are data collected (e.g., Term (quarter, semester, other), Annual, Census only, End of Term, etc.)? Are any other reporting cycles used?
Student and course data are collected at the end of term (each semester and end of summer). Faculty and staff data are collected annually.

5) Are there plans to collect the data more frequently?
No.

Reporting

1) What kinds of statistics and reports are produced regularly by the SUR? Can we get copies of these reports?
Reports are available at www.okhighered.org. See Studies and Reports.

2) If graduation and retention reporting is done, how is it calculated — 4-year, 5-year, 6-year?
We calculate one to 10 years, but generally report first-year retention, three-year or six-year graduation rates for two-year colleges, and six-year graduation rates for four-year universities.

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3) If it is a state-level system, how does the state use the data?
Resources allocation, productivity, performance funding, accountability, policy formulation and impact, audits.

Data Management Issues

1) Can campuses access the datasets themselves? If so, who has access?
Not at this time. We are currently implementing plans to create a Web-based data warehouse.

2) Are SSNs used?
Yes.

3) Who has the authority to change data elements and definitions?
All elements and definitions are reviewed annually by staff and institutional coordinators. A new manual is issued each year.

4) How are security and FERPA issues handled?
Institutions send records via FTP to servers outside the agency firewall, using passwords to their separate directories. Access to the database is restricted to State Regents' programming and IT staff only. Either directory and summarized data are shared, or written agreements are signed.

5) Do you cooperate with other (neighboring) states to share data? If so, please explain.
No.

6) Do you link the SUR to other databases (e.g., High School URS, UI Wage records, other)?
Yes, we link to UI wage, CareerTech and ACT records.

Oregon Community College Unit Record Data System (OCCURS)

History

1) When was the student unit-record (SUR) system established?
   In 1994-95.

2) By whom?
   State Office of Community Colleges Services.

3) For what purpose (e.g., resource allocation/funding formula, IPEDS, tracking student retention/graduation, tracking students across institutions)?
   Funding, advocacy, course/program approval, workforce strategies, education reform strategies, diversity, system accountability.

Coverage

1) Which institutions are included?
   All public community colleges.

2) Are any independent institutions included? If so, how many or what percentage?
   No.

3) Are there any plans for expanding the system's coverage in terms of institutions?
   No.

4) When are data collected (e.g., Term (quarter, semester, other), Annual, Census only, End of Term, etc.)? Are any other reporting cycles used?
   Quarterly and annually.

5) Are there plans to collect the data more frequently?
   No.

Reporting

1) What kinds of statistics and reports are produced regularly by the SUR? Can we get copies of these reports?
   - Basic demographics (FTE, race, gender, age, etc.).
   - Professional/technical school statistics (e.g., part-time enrollment by demographics).
   - CC/OUS matching (e.g., community college completers enrolled at OUS the following year).
   - Recent Oregon high school graduates report (e.g., Oregon high school grads enrolled at community colleges).
   - Employment wage matches, GED completers matching, single parent/displaced homemaker matching.

The Community College Profile contains our regular demographic reporting, at http://www.odccwd.state.or.us/colleges/accountability/profile/profile.htm. You can find some examples of Perkins reporting at ftp://159.121.128.138/downloads/OCCURS%20reports/ and http://data.odccwd.state.or.us/opte/.

2) If graduation and retention reporting is done, how is it calculated — 4-year, 5-year, 6-year?
We have tried different methods/definitions and have no accepted standard at this time, either for graduation or retention.

3) If it is a state-level system, how does the state use the data?
Funding, advocacy, course/program approval, workforce strategies, education reform strategies, diversity, system accountability.

Data Management Issues

1) Can campuses access the datasets themselves? If so, who has access?
Campuses do not have access to OCCURS data at this time.

2) Are SSNs used?
Encrypted SSNs.

3) Who has the authority to change data elements and definitions?
The OCCURS Data Standards Committee makes recommendations concerning data elements/definitions to the OCCURS Oversight Committee. Oversight Committee decisions are subject to approval by the Commissioner of Community Colleges and Workforce Development.

4) How are security and FERPA issues handled?
All students at Oregon Community colleges have the opportunity to give or withhold their release to use SSNs for matching with specified agencies, for the purpose of educational research. Data is shared only under a mutually signed data security and confidentiality agreement. Reporting is in the aggregate only, with minimum cell size of three.

5) Do you cooperate with other (neighboring) states to share data? If so, please explain.
For a couple of years we participated in something called the Western States Educational Data Consortium and shared data with Washington and California for the purpose of tracking transfers. We no longer do this, because our AG advised against it for confidentiality concerns.

6) Do you link the SUR to other databases (e.g., High School URS, UI Wage records, other)?
- Professional/technical school statistics (e.g., part-time enrollment by demographics).
- CC/OUS matching (e.g., community college completers enrolled at OUS the following year).
- Recent Oregon high school graduates report (e.g., Oregon high school grads enrolled at community colleges).
- Employment wage matches, GED completers matching, single parent/displaced homemaker matching.

Oregon Student Computerized Administrative Reporting File (SCARF)

History

1) When was the student unit-record (SUR) system established?
SCARF is 10-12 years old, but we have data for the last 30 years.

2) By whom?
Oregon University System.

3) For what purpose (e.g., resource allocation/funding formula, IPEDS, tracking student retention/graduation, tracking students across institutions)?
IPEDS reporting, State Board of Higher Education Reporting, and OUS planning and policy (e.g., curriculum planning, enrollment studies).

Coverage

1) Which institutions are included?
OUS institutions.

2) Are any independent institutions included? If so, how many or what percentage?
No.

3) Are there any plans for expanding the system's coverage in terms of institutions?
We currently have a data exchange with Oregon community colleges. We would not report on their data, but we might integrate it into a Web-interface database with reports and some limited access to unit record level data. We also could integrate summary data for analysis from NCES or other sources.

4) When are data collected (e.g., Term (quarter, semester, other), Annual, Census only, End of Term, etc.)? Are any other reporting cycles used?
Each quarter, five times a year for enrollment data. Once per year for degrees data.

5) Are there plans to collect the data more frequently?
Not currently.

Reporting

1) What kinds of statistics and reports are produced regularly by the SUR? Can we get copies of these reports?
Annual enrollment reports; annual fact book (e.g., student demographics, academic preparation and performance; annual institutional profiles; annual retention and graduation studies; cost of instruction reports, and faculty salary reports.)

2) If graduation and retention reporting is done, how is it calculated — 4-year, 5-year, 6-year?
Six years is the OUS standard, but we can tell from these reports how many graduated in two, three, four, five and six years. We also do freshman-sophomore retention annually.

3) If it is a state-level system, how does the state use the data?
Policy analysis; performance measuring; board requests; central IPEDS reporting; accountability; and sharing with other state agencies via an eleven-agency shared database.

Data Management Issues

1) Can campuses access the datasets themselves? If so, who has access?
Not yet, but it is planned. Three levels of access: public (already created reports), OUS parties with passwords (point-and-click selection of cohort for boilerplate reports), trusted OUS users (unit record at table level access, SQL*Plus, etc., to create new reports).

2) Are SSNs used?
Yes — but, internally, students are matched with a unique personal identification number.

3) Who has the authority to change data elements and definitions?
The Office of Institutional Research, the chancellor and the board.

4) How are security and FERPA issues handled?
Follow federal guidelines pretty strictly. Get legal approval before any data is shared.

5) Do you cooperate with other (neighboring) states to share data? If so, please explain.
Washington State Community and Technical Colleges System annually sends SSNs from Washington high school graduates. We match with our records and return SSNs and some other information: school attending, terms attending, etc.

6) Do you link the SUR to other databases (e.g., High School URS, UI Wage records, other)?
Participating in Oregon Shared Information System of 10 state agencies contributing to common database (e.g., corrections, military, employment, etc.). We can generate reports, but participating agencies cannot directly access unit-record data from other agencies.

South Carolina Commission on Higher Education Management Information System

History

1) When was the student unit-record (SUR) system established?
Full implementation in the fall of 1993.

2) By whom?
South Carolina Commission on Higher Education.

3) For what purpose (e.g., resource allocation/funding formula, IPEDS, tracking student retention/graduation, tracking students across institutions)?
In the beginning, the data were used for the funding formula and IPEDS. As the years have gone by, performance funding, scholarship information and retention/graduation have all used the data that we have collected.

Coverage

1) Which institutions are included?
All public institutions.

2) Are any independent institutions included? If so, how many or what percentage?
Yes. In 1996, one independent institution began reporting unit-record data, and we've picked up several more throughout the years. For the enrollment and completion data that were reported for Fall 2001, we made a statewide push for unit record reporting from the independent institutions. Primarily, this was because of the implementation of statewide scholarship programs and the need for analysis. Of the approximately 25 institutions, 15 reported unit record enrollment on all students.

3) Are there any plans for expanding the system's coverage in terms of institutions?
As explained above, we will continue to push for the remainder of the independent institutions to report their enrollment data.

4) When are data collected (e.g., Term (quarter, semester, other), Annual, Census only, End of Term, etc.)? Are any other reporting cycles used?
For the publics, enrollment data are collected each semester and in the summer. Information is reported after the matriculation date for classes has closed.
For the independents, enrollment data are collected only in the fall and are reported as of census date or after the matriculation date.

5) Are there plans to collect the data more frequently?
No.

Reporting

1) What kinds of statistics and reports are produced regularly by the SUR? Can we get copies of these reports?

For IPEDS, enrollments and completion reports, go to our Web site, www.che400.state.sc.us. In the middle of the page is the acronym "CHEMIS." Click on this. At the top of the page is a connection for a listing of all the reports that are available. From the CHEMIS main page, click on any one of the terms, for example Fall 2001, and the majority of the reports that are available have been put on the Web page as PDF files for viewing and printing. If it is not posted to the Web, we do not print paper copies anymore for filing.

2) If graduation and retention reporting is done, how is it calculated — 4-year, 5-year, 6-year?
We have done retention rates from freshmen to sophomore, the graduation rates for the fourth, fifth and sixth years, and also the 150 percent rates for the certificate, diploma and associate seekers.

3) If it is a state-level system, how does the state use the data?
Performance funding; mission resource requirements — this determines the need for funding.

Data Management Issues

1) Can campuses access the datasets themselves? If so, who has access?
No.

2) Are SSNs used?
Yes.

3) Who has the authority to change data elements and definitions?
The MIS area. When new data are needed because of state requirements, we have a committee composed of representatives from the institutions and the staff that meets to finalize these definitions. The changes are then coordinated through MIS.

4) How are security and FERPA issues handled?
Unit record data sits on a server that is inside our network and, at present, is accessed by only a few individuals in the office. Once the student record is processed by CHE, the SSN goes away and is converted to a CHE number. The files that are used for analysis use the CHE number rather than the SSN number.
Individual data on students are not released to the public or institutions. If a request is made for unit record data, the request is examined to make sure that it falls within the FERPA guidelines and that no individual data will ever be released. A signed statement from the requesting party is received to show it will adhere to the privacy policy.

5) Do you cooperate with other (neighboring) states to share data? If so, please explain.
We have much interest in doing this but have not yet because of our privacy concerns.

6) Do you link the SUR to other databases (e.g., High School URS, UI Wage records, other)?
We linked one period of completion data to the UI Wage records for performance funding, but we were not satisfied with the results.

South Dakota Regents Information System (RIS)

History

1) When was the student unit-record (SUR) system established?
South Dakota has been using the current Colleague (Datatel) database since Fall 1998. Before that, South Dakota used SCT's ISIS database, beginning in 1987.

2) By whom?
The South Dakota Board of Regents (BOR), Regents Information Systems (RIS).

3) For what purpose (e.g., resource allocation/funding formula, IPEDS, tracking student retention/graduation, tracking students across institutions)?
SD uses the database for all record keeping, tracking and reporting purposes related to public higher education in the state, including all the purposes you mention above.

Coverage

1) Which institutions are included?
All six public universities: Black Hills State University, Dakota State University, Northern State University, South Dakota School of Mines and Technology, South Dakota State University and the University of South Dakota.

2) Are any independent institutions included? If so, how many or what percentage?
No private colleges/universities are included.

3) Are there any plans for expanding the system's coverage in terms of institutions?
No.

4) When are data collected (e.g., Term (quarter, semester, other), Annual, Census only, End of Term, etc.)? Are any other reporting cycles used?
The database is "live" since we collect data daily in the form of new prospects, applicants, students, course registrations and so on. We extract data from the database on the BOR identified census date in fall and spring semesters, at the midterm of each fall semester (for IPEDS reporting), and at the end of each semester (fall, spring, and summer). The field definitions that we delivered to you represent the information included in these extracts.

5) Are there plans to collect the data more frequently?
No, since this is a live database.

Reporting

1) What kinds of statistics and reports are produced regularly by the SUR? Can we get copies of these reports?

South Dakota produces many standard reports and ad hoc reports in response to BOR needs. See the following list of the most common standard reports, and please let us know which reports you would be interested in seeing.

2) If graduation and retention reporting is done, how is it calculated — 4-year, 5-year, 6-year?
Graduation reporting covers five years.
At present, South Dakota uses only the Fall 1998 and subsequent (Colleague) data for retention reporting. As the Colleague database is in place for a longer time, we may extend that period.

3) If it is a state-level system, how does the state use the data?
South Dakota uses information from the database for planning and decision making.

Data Management Issues

1) Can campuses access the datasets themselves? If so, who has access?
Each university has access to its own extracts (and, obviously, to its own live data). A Colleague Security Coordinator at each university regulates and grants access to specific portions of the data.

2) Are SSNs used?
South Dakota requires employees to provide SSNs, but students provide SSNs on an optional basis.

3) Who has the authority to change data elements and definitions?
A statewide committee with at least one representative from each university has regulated change in data elements and definitions based on BOR reporting needs. South Dakota is in the process of establishing a statewide Assurance System for Standard University Reporting Elements (ASSURE). When this system is fully in place, all changes will be regulated by the BOR Technology Advisory Council headed by the South Dakota Chief Information Officer.

4) How are security and FERPA issues handled?
Three ways:
- The Colleague Security Coordinator at each university considers privacy and data-integrity issues in making decisions about who requires access to each portion of the data.
- Colleague software allows South Dakota to regulate distribution of each student's information based on the student's instructions.
- Registrars and other campus officials regulate all distribution of student information.

5) Do you cooperate with other (neighboring) states to share data? If so, please explain.
No.

6) Do you link the SUR to other databases (e.g., High School URS, UI Wage records, other)?
South Dakota links information in the academic database with separate state financial and personnel systems. Currently, South Dakota is investigating ways to electronically import students' previous academic information.

Texas Higher Education Coordinating Board Student Data File

History

1) When was the student unit-record (SUR) system established?
Universities and academic components of community colleges in 1973. Health-related institutions in 1978, and the vocational-technical components of community colleges in 1985.

2) By whom?
Texas Education Code. Subchapter C. 61.051 Powers and Duties of Board.
(a) The board shall represent the highest authority in the state in matters of public higher education and is charged with the duty to take an active part in promoting quality education in the various regions of the state. The board shall be responsible for assuring that there is no discrimination in the distribution of programs and resources throughout the state on the basis of race, national origin, or sex.

3) For what purpose (e.g., resource allocation/funding formula, IPEDS, tracking student retention/graduation, tracking students across institutions)?
T.E.C. Subchapter C. 61.051 Powers and Duties of Board.
(k) The board shall establish and maintain a management information system that includes the presentation of uniform statistical information that is appropriate to planning, financing, and decision-making rather than regulation.

Coverage

1) Which institutions are included?
All public institutions.

2) Are any independent institutions included? If so, how many or what percentage?
Not at this time.

3) Are there any plans for expanding the system's coverage in terms of institutions?
Plan to start in Fall 2002 to collect independent colleges and university student data.

4) When are data collected (e.g., Term (quarter, semester, other), Annual, Census only, End of Term, etc.)? Are any other reporting cycles used?
Term — effective census date.

5) Are there plans to collect the data more frequently?
No.

Reporting

1) What kinds of statistics and reports are produced regularly by the SUR? Can we get copies of these reports?
   Enrollment and graduation reports, university performance reports and Community College Data Profiles can be found on our Web site: http://www.thecb.state.tx.us/DataAndStatistics/

2) If graduation and retention reporting is done, how is it calculated — 4-year, 5-year, 6-year?
   Based on the IPEDS definition of Graduation Rate Survey — six years for universities and three years for community and technical colleges.

3) If it is a state-level system, how does the state use the data?
   Baccalaureate graduation rates, enrollment forecasts, retention and graduation report, etc. Look at our Web site http://www.thecb.state.tx.us/DataAndStatistics/ and the Data Information Guide identified there.

Data Management Issues

1) Can campuses access the datasets themselves? If so, who has access?
   No.

2) Are SSNs used?
   Yes.

3) Who has the authority to change data elements and definitions?
   There is an internal Data Committee.

4) How are security and FERPA issues handled?
   The entity has to fill out and sign a confidentiality request that explains the use of the data and how the confidentiality of the student data will be addressed. The CB legal staff then has to approve.

5) Do you cooperate with other (neighboring) states to share data? If so, please explain.
   No.

6) Do you link the SUR to other databases (e.g., High School URS, UI Wage records, other)?
   A P-16 data warehouse began development this year with the Texas Education Agency and the State Board of Education Certification. It is in the infant stage. UI Wage records have been matched for community college students over the past seven years and released back to the college if they have signed a confidentiality form.

Utah System of Higher Education Data File

History

1) When was the student unit-record (SUR) system established?
We have data from 1998-1999. We also have some earlier data, but I'm not sure of the accuracy. We also have several cohorts that have been collected over time.

2) By whom?
The SUR was created by the Commissioner's office by establishing the Statewide Data Committee.

3) For what purpose (e.g., resource allocation/funding formula, IPEDS, tracking student retention/graduation, tracking students across institutions)?
For all of the above reasons, including enrollment reporting.

Coverage

1) Which institutions are included?
Public institutions: University of Utah, Utah State University, Weber State University, Southern Utah University, Snow College, Utah Valley State College, Salt Lake Community College, College of Eastern Utah and Dixie State College.

2) Are any independent institutions included? If so, how many or what percentage?
No.

3) Are there any plans for expanding the system's coverage in terms of institutions?
The State of Utah has recently created a tenth college, The College of Applied Technology. We will begin to collect data for this institution soon.

4) When are data collected (e.g., Term (quarter, semester, other), Annual, Census only, End of Term, etc.)? Are any other reporting cycles used?
We collect at end of term for summer and third week and end of term for spring and fall semesters.

5) Are there plans to collect the data more frequently?
No.

Reporting

1) What kinds of statistics and reports are produced regularly by the SUR? Can we get copies of these reports?
We generate many reports from this data.

2) If graduation and retention reporting is done, how is it calculated — 4-year, 5-year, 6-year?
We are looking at time to graduation and using the number of hours attended. We are in the process of designing a tracking system that will be used to look at retention and other statistics.

3) If it is a state-level system, how does the state use the data?
We create many reports for legislative needs in the decision-making process.

Data Management Issues

1) Can campuses access the datasets themselves? If so, who has access?
Not yet.

2) Are SSNs used?
Yes.

3) Who has the authority to change data elements and definitions?
The statewide data committee.

4) How are security and FERPA issues handled?
We have an agreement that was created by our legal department for sharing data with outside institutions. We only share for research and tracking purposes, and only with a signed document. If we share with others, it is not at record level detail, but summarized.

5) Do you cooperate with other (neighboring) states to share data? If so, please explain.
Yes, we do share some summarized data with other states. (No explanation.)

6) Do you link the SUR to other databases (e.g., High School URS, UI Wage records, other)?
We provide data to the Division of Workforce Services, per the signed agreement.

Washington State Board for Community & Technical Colleges Data Warehouse

History

1) When was the student unit-record (SUR) system established?
The State Board Data Warehouse was established in 1994. An earlier version of unit records for the system has existed since 1972.

2) By whom?
State Board for Community and Technical Colleges.

3) For what purpose (e.g., resource allocation/funding formula, IPEDS, tracking student retention/graduation, tracking students across institutions)?
Research and analysis, state and federal reporting requirements, resource allocation.

Coverage

1) Which institutions are included?
Public two-year colleges.

2) Are any independent institutions included? If so, how many or what percentage?
No. Note, however, that the system links to a public two-year/four-year unit record system called MRTE managed by the University of Washington.

3) Are there any plans for expanding the system's coverage in terms of institutions?
No.

4) When are data collected (e.g., Term (quarter, semester, other), Annual, Census only, End of Term, etc.)? Are any other reporting cycles used?
End of Term — four times per year.

5) Are there plans to collect the data more frequently?
No.

Reporting

1) What kinds of statistics and reports are produced regularly by the SUR? Can we get copies of these reports?
Reference the publications section of www.sbctc.ctc.edu, specifically the fall and academic year reports.

2) If graduation and retention reporting is done, how is it calculated — 4-year, 5-year, 6-year?
Graduation rates are reported per IPEDS requirements. Refer to www.sbctc.ctc.edu Student Outcomes and Success for Retention rates.

3) If it is a state-level system, how does the state use the data?
Accountability reporting, policy research and analysis, FTE counting and allocation of funds to the institutions.

Data Management Issues

1) Can campuses access the datasets themselves? If so, who has access?
Yes. At least one person per institution is given access to quarterly Microsoft Access databases including the current quarter data.

2) Are SSNs used?
As of Summer Quarter 2002, SSNs are no longer used as the unique identifier. SSNs are stored in the database for data-linking purposes.

3) Who has the authority to change data elements and definitions?
Assistant Director of IT and the Database Administrator, with advice from analysts.

4) How are security and FERPA issues handled?
Confidentiality forms, encrypted files and a secure network and database connection.

5) Do you cooperate with other (neighboring) states to share data? If so, please explain.
We share data on transferring students.

6) Do you link the SUR to other databases (e.g., High School URS, UI Wage records, other)?
UI Wage records, Washington state four-year universities, high schools, welfare.

University of Wisconsin System Data File

History

1) When was the student unit-record (SUR) system established?
1973.

2) By whom?
Mandated by the Board of Regents (BOR), implemented by this office (Office of Policy Analysis and Research).

3) For what purpose (e.g., resource allocation/funding formula, IPEDS, tracking student retention/graduation, tracking students across institutions)?
All of the above. To provide data to assist the BOR and University of Wisconsin System officers better manage the system. In the 1970s and '80s, it was used as the base of the funding formula.

Coverage

1) Which institutions are included?
All institutions in the UW System: two doctoral/research universities, 11 four-year comprehensive universities and 13 two-year freshman/sophomore colleges.

2) Are any independent institutions included? If so, how many or what percentage?
No.

3) Are there any plans for expanding the system's coverage in terms of institutions?
No.

4) When are data collected (e.g., Term (quarter, semester, other), Annual, Census only, End of Term, etc.)? Are any other reporting cycles used?
Each semester, including summer term.

5) Are there plans to collect the data more frequently?
No.

Reporting

1) What kinds of statistics and reports are produced regularly by the SUR? Can we get copies of these reports?
Fall enrollment by institution, accountability reports, IPEDS, Fact Book and several other standard reports can be found on our Web site: www.uwsa.edu/opar.

2) If graduation and retention reporting is done, how is it calculated — 4-year, 5-year, 6-year?
Standard is six years, though we also calculate it for four and five years.

3) If it is a state-level system, how does the state use the data?
(No response.)

Data Management Issues

1) Can campuses access the datasets themselves? If so, who has access?
Yes, campuses determine who has access to their data.

2) Are SSNs used?
A student identification number is used; that number may be, but need not be, the SSN.

3) Who has the authority to change data elements and definitions?
System Administration's Office of Policy Analysis and Research, working in concert with campuses.

4) How are security and FERPA issues handled?
(No response.)

5) Do you cooperate with other (neighboring) states to share data? If so, please explain.
No.

6) Do you link the SUR to other databases (e.g., High School URS, UI Wage records, other)?
We have done very little in this area, but plans are under way to link to additional databases in the future.

Wyoming Community College Commission Student Database

History

1) When was the student unit-record (SUR) system established?
   April 2000.

2) By whom?
   Following legislative mandate, the WCCC staff established the database.

3) For what purpose (e.g., resource allocation/funding formula, IPEDS, tracking student retention/graduation, tracking students across institutions)?
   It is a statutory requirement to allow for state-level review and reporting.

Coverage

1) Which institutions are included?
   All Wyoming Community Colleges: Casper College, Central Wyoming College, Eastern Wyoming College, Laramie County Community College, Northwest College, Sheridan College and Western Wyoming Community College are included in the database.

2) Are any independent institutions included? If so, how many or what percentage?
   No private institutions are included in our database.

3) Are there any plans for expanding the system's coverage in terms of institutions?
   No current plans to expand in terms of institutions.

4) When are data collected (e.g., Term (quarter, semester, other), Annual, Census only, End of Term, etc.)? Are any other reporting cycles used?
   Data are collected February 15, July 15 and October 15 of each year.

5) Are there plans to collect the data more frequently?
   No current plans to increase frequency of data harvesting.

Reporting

1) What kinds of statistics and reports are produced regularly by the SUR? Can we get copies of these reports?
   Currently we are not producing any reports with the data, as we have just recently completed the first cycle of successful data collection and are still in the building stages. We do plan to produce several studies and reports, including those on graduation rates and retention, with the information obtained.

2) If graduation and retention reporting is done, how is it calculated — 4-year, 5-year, 6-year?
   As we are not currently doing any reporting, we have not established the methodology.

3) If it is a state-level system, how does the state use the data?
We are the state agency that utilizes the data to track student performance (graduation rates, etc.).

Data Management Issues

1) Can campuses access the datasets themselves? If so, who has access?
The campuses are free to keep and view their data output in original text file form or converted form.

2) Are SSNs used?
Yes, SSNs are used solely for tracking for retention and graduation.

3) Who has the authority to change data elements and definitions?
The WCCC has complete authority over the changing of data elements and the definitions.

4) How are security and FERPA issues handled?
Student data output is kept in computer directories that are secured and available only to authorized commission staff.
We follow FERPA guidelines for the release of student data and have very strict access guidelines within our agency.

5) Do you cooperate with other (neighboring) states to share data? If so, please explain.
No.

6) Do you link the SUR to other databases (e.g., High School URS, UI Wage records, other)?
Not currently. Some of the colleges do link to the Department of Employment for wage record follow-up.

Missing states

The following states were unable to complete the Student Unit-Record Database follow-up survey:

Alaska

Florida Community College System

Georgia

Maine

North Dakota

NY–CUNY

Tennessee

Virginia

Wisconsin

West Virginia

Appendix D: Contact information for state-level unit-record databases

Alabama
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